

**NWS: EHB-6, Software Note 19**

**DoD: TO 31P1-4-108-603**

**FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29**

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## **RADAR PRODUCT GENERATOR (RPG) GROUP SOFTWARE BUILD 2.0**

### **DOPPLER METEOROLOGICAL RADAR WSR-88D**



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COMMERCE, THE AIR FORCE, THE NAVY, AND TRANSPORTATION

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**Issuance Number: EHB 6-02-07**

**Data Code: 3118777**

**Issuance Date: 16 August 2002**

**NWS/DoD Rescission Date: 15 November 2003**

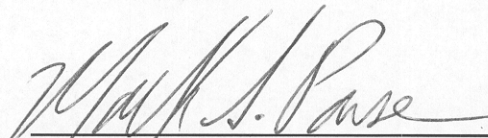
**FAA APPROVAL**

Digitally signed by George Francis  
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**BY ORDER OF THE SECRETARY OF THE AIR FORCE**

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TOMA

**1. SUBJECT**

Radar Product Generator (RPG) Group Software Build 2.0.

**2. PURPOSE**

The purpose of this modification is to provide instructions and software for loading the new RPG Build 2.0 software. This document is issued as a result of a Radar Operation Center (ROC) Engineering Change Proposal (ECP) 0161, RPG Software Build 2.0.

Specifically, RPG Software Build 2.0 provides the following enhancements:

- Radar Echo Classifier to identify anomalous propagation leased ground clutter. Produces two new products - Clutter Likelihood Reflectivity (CLR) and Clutter Likelihood Doppler (CLD).
- Ingest of a bias table from AWIPS for Precipitation Processing System (PPS) Adjustment algorithm.
- Improvement to window management on RPG HCI.
- Additional new products - High Resolution Vertical Integrated Liquid (VIL) and Superob for NCEP model initialization.
- Enhancements to clutter region and PRF selection.
- Disabled the power key on the keyboard.
- Changes for OPUP transition to TCP/IP.

Upon completion of the software load, the following windows may be accessed to show some of the changes incorporated into the new build:

- RPG Control/Status (main HCI) window shows the software build number (e.g., B2.0) in the lower right corner of the screen. The software version is also distributed to all users in the General Status Message (GSM).
- Add reference to algorithms. Select RPG-Products, then select "Algorithms". Select the pull-down menu for the algorithms. There will be changes in the HydroMet Adjustment and additions of the REC AP/Clutter Target and Superob Adaptation.

**The actual downtime for the RPG will be approximately 2 hours when no data will be available.**

For FAA Redundant sites, Build 2.0 should first be loaded on one channel and the Distant MSCF. The other channel can be operating on the old software build during this time. However, the channel on the old build must be shutdown before Build 2.0 is brought up on the other channel to avoid cross-talk between the different software builds.

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**DoD: TO 31P1-4-108-603**  
**FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29**

For additional information concerning this document, contact the ROC Hotline, Norman, OK; phone number: (800) 643-3363 or (405) 366-2980 or by e-mail at [NEXRAD.Hotline@noaa.gov](mailto:NEXRAD.Hotline@noaa.gov). An electronic copy of this document can be found at the following internet address:  
[www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp](http://www.roc.noaa.gov/ssb/sysdoc/techman/tmlinks.asp)

**3. SITES AFFECTED**

See [ATTACHMENT 5](#) for site effectivity.

**4. ESTIMATED COMPLETION DATE**

This modification must be completed and reported no later than 60 days after receipt of this document.

**5. EQUIPMENT AFFECTED**

Radar Product Generator Group.  
Master System Control Function Workstation.  
Base Data Distribution Server.

**6. SPARES AFFECTED**

Not applicable.

**7. MODIFICATION ACCOMPLISHED BY**

Site electronic systems analysts and/or electronics technicians will accomplish this task. One technician is required to perform these procedures.

**8. MATERIAL REQUIRED**

The following kit will be required to install Software Build 2.0. NWS sites that have a DoD MSCF will receive a separate kit for the DoD MSCF.

Nomenclature	Qty
CD-ROM, ORPG Load Version 2.0 (these are two identical CD-ROMs)	2
3.5 inch floppy disk, RPG Adaptation Data	3
CD-ROM, Electronic Performance Support system (EPSS)	1
Release Notes, Open RPG Build 2.0	1

**9. SOURCE OF MATERIALS**

The items in paragraph 8 will be shipped to each site by the National Weather Service (NWS) ROC.

**10. SPECIAL TOOLS AND TEST EQUIPMENT REQUIRED**

Not applicable.

**11. TIME AND PERSONNEL REQUIRED**

Work Phases	Work-hours
Unpacking	0.0
Coordination/Backup	2.0
Installation	5.0
Assembly	0.0
Operational Check	0.5
Total Work-hours	7.5

**12. DOCUMENTS AFFECTED**

- a. Maintenance Instructions, Radar Product Generation (RPG), dated 1 August 2001.  
NWS: EHB 6-525, Change 2  
DoD: AF TO 31P1-4-108-452-1, Change 2  
FAA: TI 6345.1 V50, Change 2
- b. Operations Instructions, Radar Product Generation (RPG), dated 1 August 2001.  
NWS: EHB 6-526, Change 2  
DoD: AF TO 31P1-4-108-451-1, Change 2  
FAA: TI 6345.1 V50, Change 2
- c. Guidance on Adaptable Parameters, dated August 1, 2001  
NWS: WSR-88D Handbook Volume 4, ORPG, Change 2

**13. VERIFICATION STATEMENT**

This modification was successfully installed at WFO Amarillo, TX, WFO Atlanta, GA, WFO Sacramento, CA, Beale AFB, CA, WFO Reno, NV, South Kauai, HI.

**14. DISPOSITION OF REMOVED AND REPLACED PARTS/MATERIALS**

Not applicable.

**15. PROCEDURES**

Perform the following procedures that apply for your site. NWS sites may also need to perform the procedures in [ATTACHMENT 1](#) and [ATTACHMENT 4](#) for each DoD or FAA related MSCF. It is expected that the ORPG, its corresponding MSCF, and the corresponding BDDS (if applicable) will be loaded on the same date. If the MSCF and/or BDDS processors are located remotely from the ORPG, then it is imperative that a load date be agreed upon for all three systems by the affected maintainers.

The NEXRAD site Unit Radar Committee (URC) chairman must coordinate downtime with all dedicated users in accordance with Interagency NEXRAD Operation Memorandum of Agreement (MOA).

- [ATTACHMENT 1](#), MSCF Software Build 2.0 Load Instructions
- [ATTACHMENT 2](#), ORPG Software Build 2.0 Load Instructions
- [ATTACHMENT 3](#), BDDS Software Build 2.0 Load Instructions
- [ATTACHMENT 4](#), MSCF Restoration of Adaptable Parameters and Backups

**16. FAA DISTRIBUTION**

This directive is distributed to selected offices and services within Washington headquarters, the William J. Hughes Technical Center, the Mike Monroney Aeronautical Center, regional Airway Facilities divisions, and Airway Facilities field offices having the following facilities/equipment: NXRAD.

**17. CHANGES TO TABLE OF CONTENTS (FAA)**

This chapter will be included in the next revision to the table of contents for FAA Order 6345.1, Electronic Equipment Modification Handbook - Next Generation Weather Radar (NEXRAD).

To obtain additional copies of this publication, contact Printing and Distribution Team, AMI-700B, at (405) 954-3771.

**18. RECOMMENDATIONS FOR CHANGES (FAA)**

Forward any recommendations for changes to this directive through normal channels to the National Airway Systems Engineering Division, AOS-200, Operational Support.

**19. REPORTING INSTRUCTIONS**

**a. NWS**

Report completed modification on WS Form A-26, Engineering Management Reporting System Maintenance Record, according to the instructions in Engineering Handbook No. 4 (EHB-4), Engineering Management Reporting System (EMRS), part 2 and Appendix G. Include the following information on the WS Form A-26:

- An Equipment Code of MSCF in Block 7.
- The appropriate serial number in Block 8.
- A Mod No. of S19 in Block 17a.

See ATTACHMENT 7 for a completed sample of WS Form A-26.

**b. DoD**

Update the AFTO Form 95 to show TCTO compliance. Report TCTO compliance in accordance with TO 00-20-2, Table 3-10, Rule 9.

**c. FAA**

Enter this directive number, date, and chapter number on the appropriate FAA Form 6032-1, Airway Facilities Modification Record.

Use the Maintenance Management System (MMS) application Log Equipment Modification (LEM) function to report the completion of this modification. Verify N is in the REP COD field to ensure the log entry will be upward reportable to the national data base for access by AOS. If not found in the LEM database, this change should be entered into the LEM fields as follows:

- (1) Order No.: 6345.1
- (2) Chapter: 29
- (3) Change: 32

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**d. DoD and FAA**

Complete [ATTACHMENT 6](#), and return the information to the ROC by one of the methods below:

- (1) Mail Address:      Program Branch, Retrofit Management Team  
WSR-88D Radar Operation Center  
3200 Marshall Ave., Suite 101  
Norman, Oklahoma 73072-8028
- (2) Fax Number:      (405) 366-6553  
ATTN: Retrofit Management Team
- (3) E-mail Address:    NEXRAD.Logistics@noaa.gov
- (4) Web Version:      <http://www.roc.noaa.gov/ssb/logistics/completion.asp>



**ATTACHMENT 1**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

**Technical Manuals Required:**

Maintenance Instructions, Radar Product Generator (RPG), dated August 1, 2001  
NWS: EHB 6-525  
DoD: AF TO 31P1-4-108-452-1  
FAA: Order 6345.1 V49

**Material Required:**

1 new 3 1/2-inch formatted floppy disk

**Initial Conditions:**

If the MSCF and/or the BDDS system is located remotely from the RPG, the System Administrator must coordinate the load date with the MSCF and BDDS locations to determine a mutually agreed upon load date.

A printer must be connected to the MSCF.

Build 1.2 must be loaded on the MSCF and the RPG.

**NOTES**

This attachment lists each window to be captured and printed, describes how to access each window, provides instructions on how to use the Snapshot program, and provides instructions to load Build 2.0 on the MSCF.

The MSCF is the operating position for the WSR-88D radar. It is assumed that this operator position is responsible for control and changes to adaptable parameters for the RPG. There is not a merge forward capability for RPG adaptation data at this time. The merge forward capability is being worked in a future software build. Hence, it is imperative the operator print all site unique meteorological adaptable parameters under the Unit Radar Committee (URC) and Agency control before Build 2.0 is loaded. The following list of Build 1.2 GUI windows is provided on which parameter windows are under URC and agency control.

All windows on this list must be printed to ensure there is a hardcopy record of site unique parameters that must be carried forward.

The initial Build 2.0 URC password will be reset to its RPG Build 1.2 default value. If you do not know the RPG Build 1.2 default value, call the WSR-88D hotline at (800)643-3363.

**ATTACHMENT 1 (Continued)**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

For FAA sites: Only one channel has to be done. The MSCF automatically updates any mismatches with the other channel.

This attachment should take approximately 2 hours to complete, but will not require the RPG to be down.

1. Print the following adaptation data windows:

**Adaptable Parameter Windows**

The parameter windows to be printed are a subset of those with URC/Agency level of control. The majority of adaptable parameter windows are accessed from the RPG Control/Status window (RPG HCI). Click on the **RPG HCI** button from the Master System Control Functions (MSCF) window. In the RPG Control/Status window, click on **Products** within the RPG area. A popup window titled **RPG Products** will appear. This popup window has buttons for Alert/Threshold, Selectable Parameters, and Algorithms. Click on these buttons to access each parameter window indicated below:

**Parameter windows accessed via the Alert/Threshold button:**

Alert Threshold Editor - Grid  
Alert Threshold Editor - Volume  
Alert Threshold Editor - Forecast

**Parameter windows accessed via the Selectable Parameters button:**

Edit Selectable Product Parameters - Contour Product  
Edit Selectable Product Parameters - OHP/THP Data Levels  
Edit Selectable Product Parameters - STP Data Levels  
Edit Selectable Product Parameters - Cell Product  
Edit Selectable Product Parameters - VAD and RCM Height  
Edit Selectable Product Parameters - Layer Product  
Edit Selectable Product Parameters - Velocity Data Levels for Precip 16/0.97 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Precip 16/1.94 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Precip 8/0.97 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Precip 8/1.94 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Clear Air 16/0.97 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Clear Air 16/1.94 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Clear Air 8/0.97 Table  
Edit Selectable Product Parameters - Velocity Data Levels for Clear Air 8/1.94 Table

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

**Parameter windows accessed via the Algorithms button:**

Algorithms - Combined Shear  
Algorithms - Hail Detection (2 Screens)  
Algorithms - Hydromet Adjustment  
Algorithms - Hydromet Preprocessing  
Algorithms - Hydromet Rate  
Algorithms - Mesocyclone  
Algorithms - Storm Cell Components  
Algorithms - Storm Cell Tracking  
Algorithms - Tornado Detection (possible 2 screens)  
Algorithms - VAD

**Modify Precipitation Detection Parameters**

From the RPG HCI, click on the precipitation category to the right of Precip Cat:  
The Precipitation Status window will appear in a few seconds. Click on the  
**Modify Parameters** button of the Precipitation Status window and the  
Modify Precipitation Detection Parameters window appears.

**Clutter Regions (options for each operator defined region)**

From the RPG HCI, click the **Clutter Regions** button on the right hand applications panel. Click on **File** to display the number of clutter files. Double click on the first site file (not Default) to display it. Use the Snapshot to print all of the regions of that file. Use the scroll bar on the lower right hand edge to display the values of each region. Repeat for the next clutter file until all are printed.

**Clutter Bypass Map Editor (Both Segments 1 and 2)**

From the RPG HCI, click the blue **Bypass Map Editor** button on the right hand applications panel.

2. Print the following operational status windows:

**Operational Status Windows**

Operational status windows will be printed to show the "overall health" of the system and user connections before the software load.

**RPG Control/Status**

The RPG Control/Status window is the RPG HCI.

**Product Distribution Comm Status: (2 Screens)**

From the RPG HCI, click on **Comms** within the Users area. Capture the status of user lines (1 - 24) (25 - 40).

**ATTACHMENT 1 (Continued)**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

**RPG Status:**

From the RPG HCI, click on **Status** within the RPG area. The RPG Status window will appear. To remove the regular status messages and identify only the alarms and errors, click on **Status** within the Message Filters area to deselect. If there are system alarms or errors, they will appear in the status window. Capture this window.

**Master System Control Functions Status:**

Click on Comms Status button. This window may need to be resized according to the device selected. Within the Comms Status window, individually select each of the following devices and capture the window for each device:

**CISCO Switch**  
**CISCO Router**  
**Router Card Status**

**BDDS HCI**

Click on the BDDS HCI button. Capture the BDDS clients status.

**Power Control Status**

Click on the Power Control button. Capture the window showing power status.

3. Perform the following Snapshot instructions from step 3. to step 19.:

Snapshot is an application that runs on each of the Sun processors used with any RPG. It is a graphics capture program that will, in effect, take a picture of any window, region, or screen that is in view on any workspace of the processor. The images can then be edited, printed or saved to disk. Snapshot can be used to make visual records of graphical images such as screen anomalies and adaptation data.

The following procedures assumes that when directed to “click” on an item, it is referring to the left mouse button, unless directed differently. The phrase “button 1” also refers to the left mouse button.

**NOTES**

The following steps are intended to be the basic procedures for using Snapshot to capture graphic images. The Snapshot application has several additional features not covered here that can be employed to manipulate images of captured graphics and to produce various print effects.

A printer is only configured at the MSCF. The ORPG, and BDDS do not have a printer installed. It will be necessary to save the images to a floppy and transfer them to a machine that has a printer associated to it.

**ATTACHMENT 1 (Continued)**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

4. If not already visible, ensure the window to be captured is visible on one of the CDE desktops. Recommend all other windows be minimized to reduce screen clutter while capturing each graphic image for print.
5. To start the Snapshot application right click on an open area of the same desktop the image is located on. The `Workspace` Menu will drop down.

**NOTE**

Image Viewer can also be started directly from the command line of a terminal window by entering: **`sdtimage -snapshot&`**

6. Click on **Applications**. The `Applications` menu will drop down.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

- Click on **Snapshot**. The two drop down menus will close and two new windows will open. The window titles are Image Viewer - Snapshot and Image Viewer - (None)(as shown in Figure 1). Once the selected window image is saved, None will be replaced by the filename.

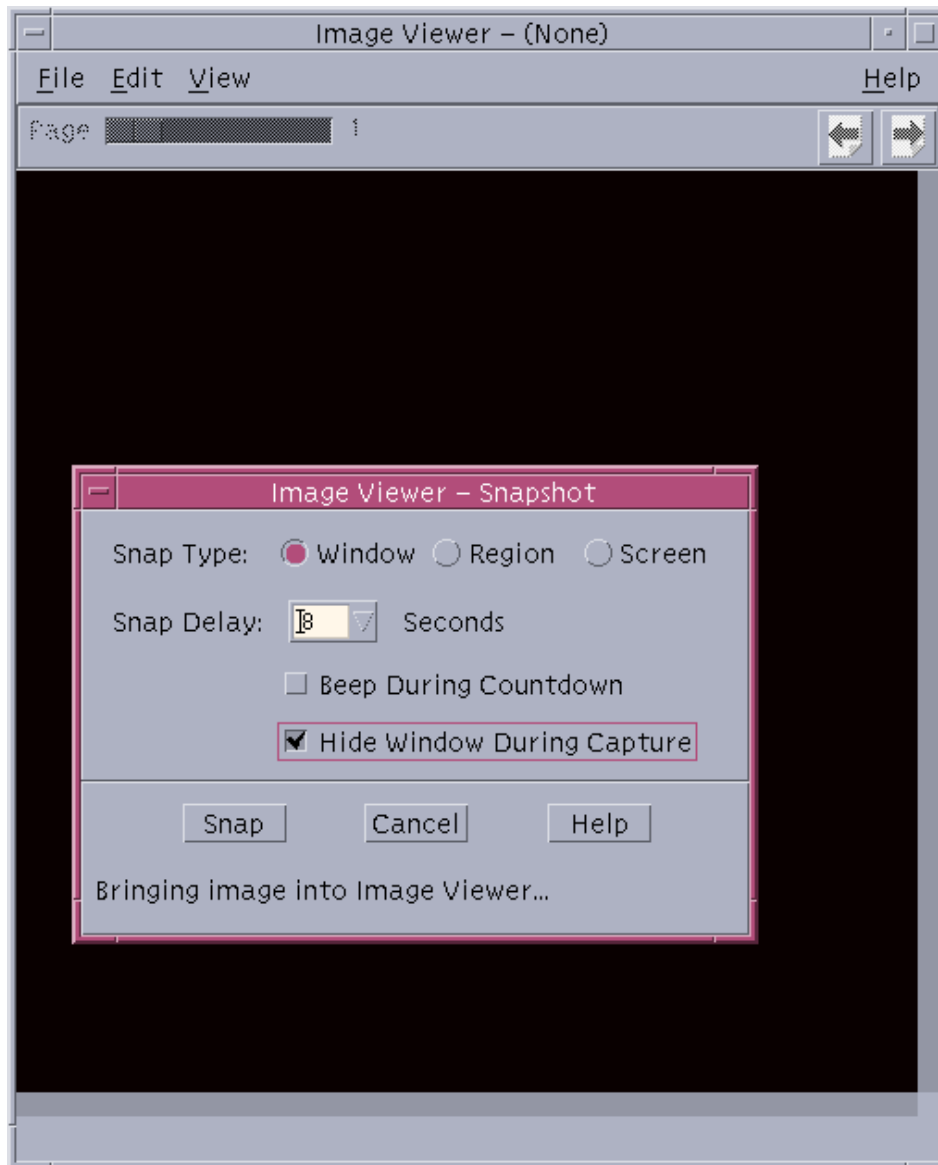


Figure 1 Image Viewer - Snapshot and blank Image Viewer before snapping any image.

**ATTACHMENT 1 (Continued)**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

8. Using the mouse, check the box next to `Hide Window During Capture` to avoid having any portions of the Snapshot windows included in the picture. A check mark will appear in the box and `Snap Delay` time will automatically change to 8 seconds. The bottom of the window will display the message `Timer adjusted to guarantee correct operation`.
9. Click on the **Snap** button. The bottom of the window displays the message `Use Button 1 to select the window, Esc to cancel`. The mouse pointer changes to crosshairs.

**NOTE**

When taking a snapshot of a menu or some other pop-up or pull-down element, you can delay the time between clicking *Snap* and the snapshot actually being taken by increasing the number of *Snap Delay* seconds. After clicking on the *Snap* button, use the extra seconds to bring up the menu or pop-up/pull-down in the window or region being snapped.

10. Click the crosshair pointer inside the window to be captured. The Snapshot window will disappear and then reappear 8 seconds later. The message at the bottom of the Snapshot window will read `Snap succeeded` once the snapping process is complete. The Image Viewer - Untitled window (see [Figure 2](#)), displaying the newly snapped image, and an Image Viewer - Palette window will also appear.

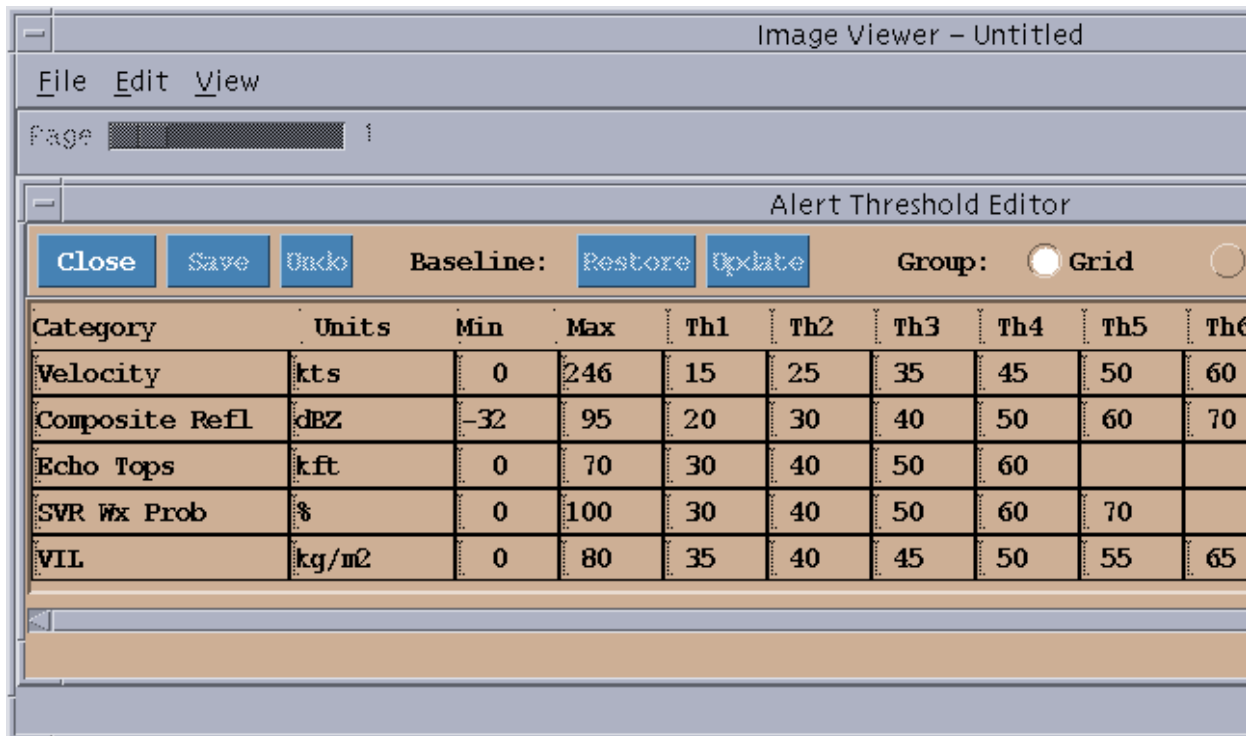


Figure 2 Image Viewer - Untitled Window

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

NOTES

If the Hide Window During Capture button was not checked, the Snapshot window will remain visible with the message Bringing image into Image Viewer visible at the bottom. If the Snapshot and Image Viewer windows are obscuring any area of the window being snapped then those parts of those windows will be included in the resulting image (as shown in Figure 3).

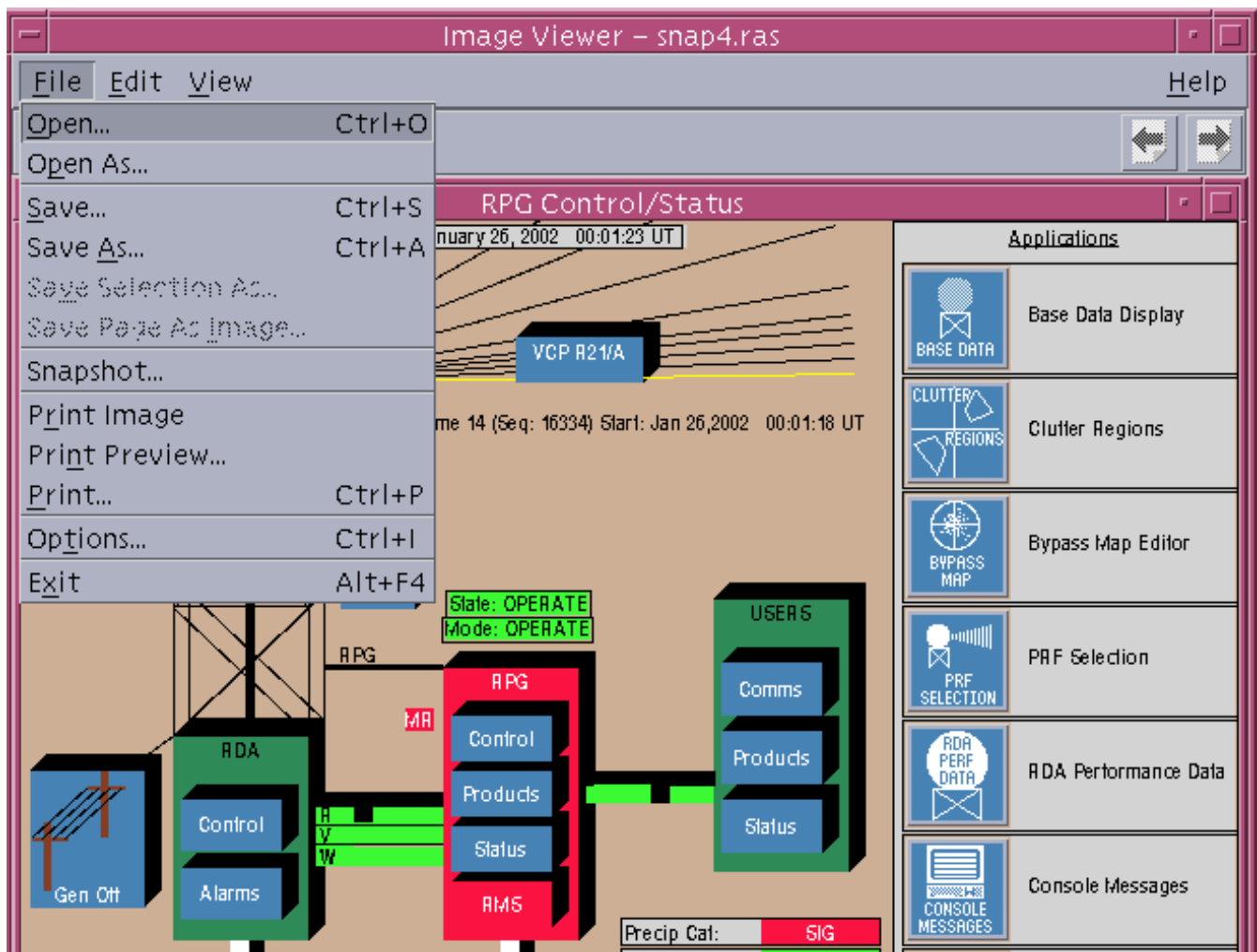


Figure 3 Image Viewer with Snapped Image Showing Drop-Down File Menu



ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

NOTE

Before printing, ensure there is a printer connected to the system. If not, use the UNIX *ftp* utility or save the image to removable media to move the image file to a system having print capabilities such as an MSCF.

11. To print the image, click on **File** on the menu bar of the Image Viewer and click on **Print** from the drop down menu.

NOTE

The MSCF Phaser 750 color laser printer is very slow. Observe the feedback window on the printer to verify the printer is turned on and is processing the print task.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

12. In the Image Viewer - Print window, change the Image Size: to **85%** using the slider bar, and then change the Image Orientation: to **Landscape**. Check the **Centered** button to place the image in the center of the print preview box, then click on the **Print** button at bottom of the Image Viewer - Print window. The Image Viewer - Print windows will disappear and the printer will produce the desired picture. At the bottom of the Image Viewer - Print window, the message Print job queued will appear.

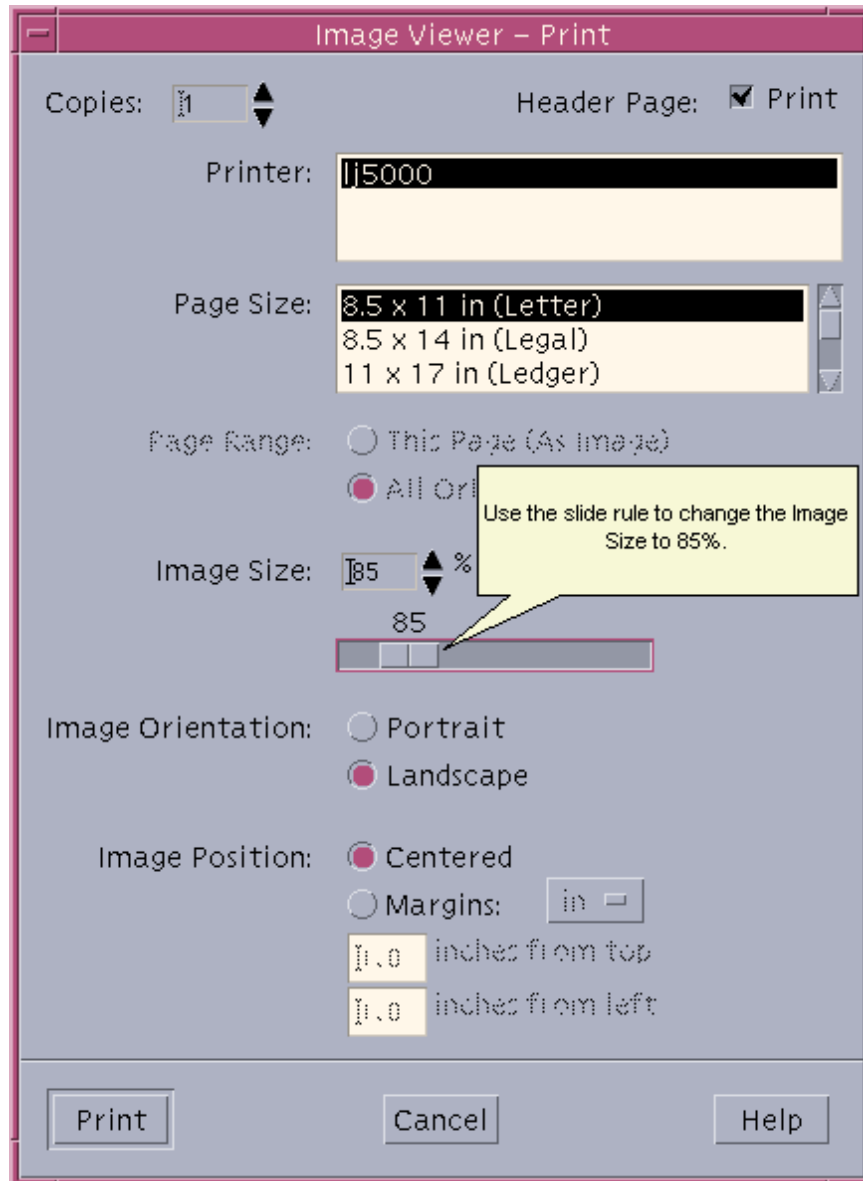


Figure 4 Image Viewer - Print Dialog Window

13. After the first image is finished printing and using the list of screens to capture, bring up the next window to capture.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

14. Return to the Image viewer - Snapshot window by clicking anywhere in the **Image viewer - Snapshot** window.

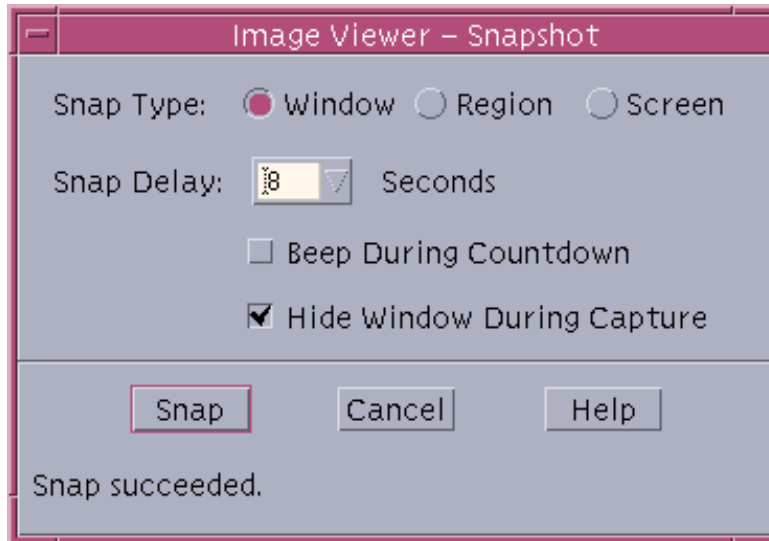


Figure 5 Image Viewer - Snapshot window

15. In the Image Viewer - Snapshot window, click on the **Snap** button. The Image Viewer - Save Snapshot? window appears, with the message Snapshot image not saved. Do you want to save the image?. Click on the **No** button.

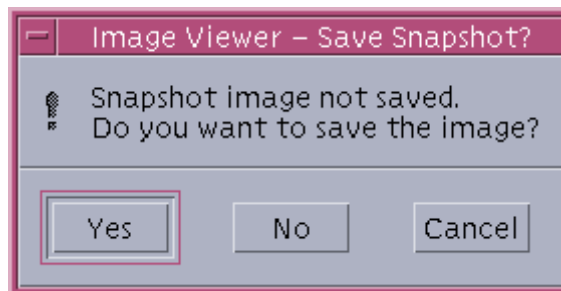


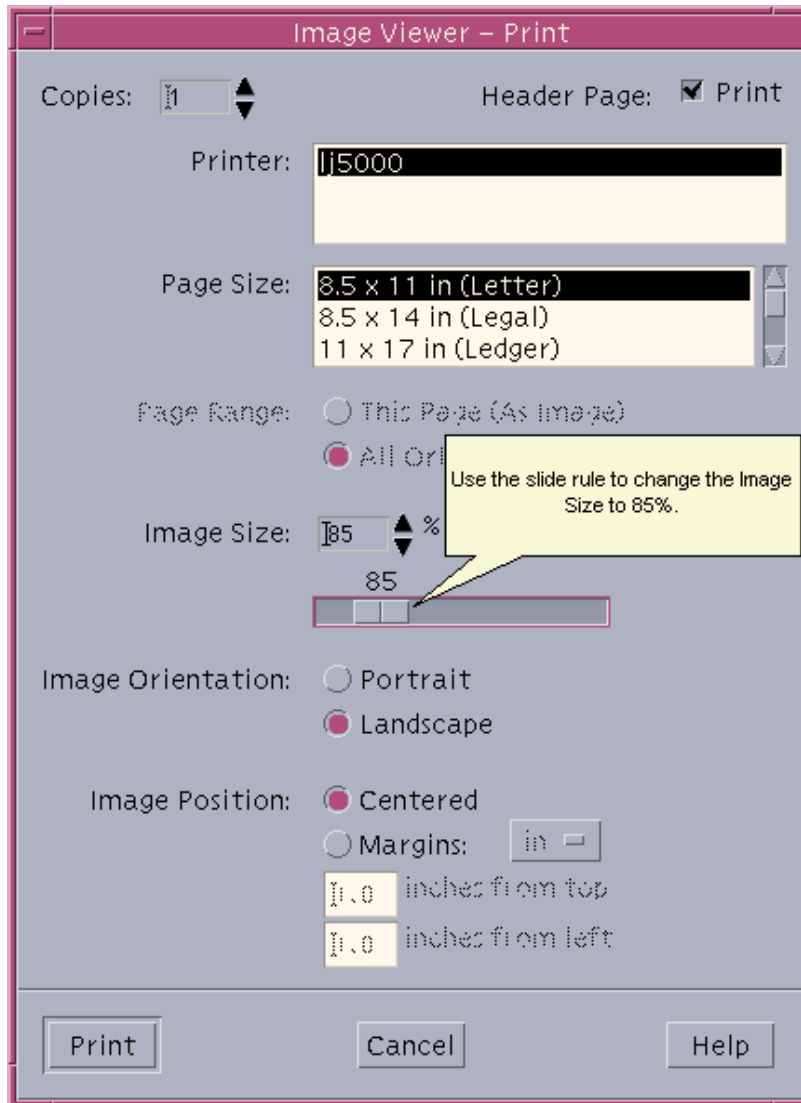
Figure 6 Image Viewer - Save Snapshot? Window

16. Click on the window to print. In approximately 8 seconds a new figure will appear in the Image Viewer - Untitled window.
17. In the Image Viewer - Untitled window, click on **File** and then click on the **Print...** option from the pull down menu.

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

18. In the Image Viewer - Print window, change the Image Size: to **85%** using the slider bar, and then change the Image Orientation: to **Landscape**. Check the **Centered** button to place the image in the center of the print preview box, then click on the **Print** button at bottom of the Image Viewer - Print window. The Image Viewer - Print windows will disappear and the printer will produce the desired picture. At the bottom of the Image Viewer - Print window, the message Print job queued will appear.



19. Repeat steps 13. through 18. until all of the desired screens are captured and printed.

**ATTACHMENT 1 (Continued)**

**MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

**NOTES**

If the following full system software load is aborted on the MSCF for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with (IAW) EHB 6-525, Table 4-82 after the full software load is successfully completed. EHB 6-525, Table 4-82 has the necessary steps to also relink user accounts to the MSCF applications software so that all users can access the MSCF applications.

The full system load script will automatically backup user IDs and passwords should backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).

Backup/restoral of user account data is not mandatory. However, if there are important logs or graphic screen captures stored in the user account directories and if these need to be retained, then backup the MSCF user account directories using the procedures specified in EHB 6-525 Table 4-61.

Step	Action/Procedure	Response/Comments
<b>NOTE</b>  Steps 20 through 26 saves the current Build 1.2 adaptation data to floppy. This floppy will not be needed again through these procedures. Only if Build 1.2 software is required to be reloaded will this floppy be needed.		
20	Open a terminal window. At the <code>user:</code> prompt, enter: <b>save_adapt_floppy&lt;CR&gt;</b>	This starts the program to save the MSCF adaptation data.
21	When the following messages appear: ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready  Insert a new floppy disk, then enter : <b>&lt;CR&gt;</b>	This continues the program to save the MSCF adaptation data.

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
22	When the following messages appear: ---> Mounting floppy ---> Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data...  The user is then returned to the user: prompt.	The MSCF adaptation data is saved to the floppy.
23	At the user: prompt, enter: <b>save_adapt_floppy -o rpg&lt;CR&gt;</b>	This starts the program to save the RPG adaptation data at the MSCF terminal.
24	When the following messages appear: ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready  <b>Do not insert a new floppy</b> as the RPG adaptation data will be automatically labeled and dated differently and can be saved on the same floppy as the MSCF adaptation data.  Enter: <b>&lt;CR&gt;</b>	This continues the program to save the RPG adaptation data.
25	When the following messages appear: ---> Mounting floppy ---> Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data...  The user is then returned to the user: prompt.	The RPG adaptation data is saved to the floppy.
26	If this is an MSCF off of a FAA redundant system, at the user: prompt enter: <b>save_adapt_floppy -o rpg2&lt;CR&gt;</b>	The feedback responses will be the same as steps 24 and 25. The same floppy can be used to save the channel 2 data.
27	When the user: prompt appears, manually press the button on the floppy drive to eject the floppy.	Ejects floppy.

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ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
28	<p>Pull out the floppy, move the write protect tab to the write protect position, and label the floppy disk with the following information: Build 1.2 Date the backup was made Site ID Store this floppy in a safe location.</p> <p>This floppy disk <b>WILL NOT</b> be used again in these procedures.</p>	This floppy should only be used if Software Build 1.2 is reloaded.
29	Close all open windows. Exit out of Common Desktop Environment (CDE) by clicking <b>EXIT</b> on the CDE Control Panel and <b>OK</b> at the confirmation window.	Leave the CDE.
30	<p>Push the standby button (below the green power LED) on the front of the MSCF Processor.</p> <p>Takes approximately 20 seconds to complete the shutdown.</p>	Halts the system and the system goes to an <code>ok</code> prompt.
<p style="text-align: center;"><b>NOTE</b></p> <p>Steps 29 through 30 contain methods to halt a system in a normal manner.</p> <p>Should these methods not work (possible system corruption), press the <b>Standby</b> button on the front of the Ultra 5/10 processor assembly (below the green power LED) and wait 30 seconds. If the system still will not shutdown, use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <b>Stop-A</b> after it starts to boot to stop the boot process. Then proceed to step 31.</p>		
31	Open the CD-ROM drive at the MSCF, place the CD-ROM labeled " <b>ORPG Load Version 2.0</b> ", into the CD-ROM drive and close the cradle.	Your site received two copies of identical software. Either copy can be used.
32	At the <code>ok</code> prompt, enter: <b>set-defaults&lt;CR&gt;</b>	This ensures all Non-Volatile Random Access Memory (NVRAM) settings are returned to default values.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
33	At the <code>ok</code> prompt, enter: <b>boot cdrom&lt;CR&gt;</b>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ... message</code> .
<p style="text-align: center;"><b>NOTE</b></p> <p>If the load starts and it is then realized that an incorrect entry was made, let the software complete its load and then start this procedure over at step 29. If the load is aborted while in progress, all user accounts will be lost.</p>		
34	<p>In approximately 5 minutes, when the following options appear:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: <b>2&lt;CR&gt;</b></p>	
35	<p>When the following option appears:</p> <p>A Distant MSCF connects to a DOD or FAA site. Is this a Distant MSCF? Yes or No [y,n,?,q]</p> <p>Enter "n" for an MSCF off of a NWS system. Enter "y" for an MSCF off of a DoD or FAA system.</p> <p>Enter either <b>y&lt;CR&gt;</b> or <b>n&lt;CR&gt;</b></p>	Installing MSCF system.



NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
36	<p>When the following option appears:</p> <p>Please enter the radar's site call letters (type 'help' for list):</p> <p>Enter the appropriate four letter site mnemonic (in lower case) and press <b>&lt;CR&gt;</b>.</p> <p>The installation will start and it will take approximately 25 minutes to complete.</p>	<p>Enter <b>help&lt;CR&gt;</b> to see a list of site mnemonics if it is unclear about which mnemonic to use.</p> <p>System responds with the system type, network number, and netmask. For example:</p> <p>System Type is: MSCF Site Name is: kxxx or pxxx Network is: 172.25.171.0 Subnet Mask is: 255.255.255.128</p>
37	<p>When the following option appears:</p> <p>Do you want to restore an adaptation archive from CD or floppy for <i>site identification</i> Yes or No [y,n,?,q]</p> <p>Enter: <b>y&lt;CR&gt;</b></p>	
38	<p>When the following option appears:</p> <p>Choose the adaptation archive media to restore from:</p> <p>1 Floppy 2 CD (current install CD)</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: <b>1&lt;CR&gt;</b></p>	<p>At this time, adaptation data can only be restored from a floppy. Use the floppy, titled "<b>RPG Adaptation Data</b>", fourth line "<b>Version: 2.0</b>", provided in the kit.</p> <p>For DoD and FAA Distant MSCFs, the floppy will be labeled "<b>MSCF Adaptation Data</b>", fourth line "<b>Version: 2.0</b>".</p>

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
39	<p>When the following option appears:</p> <pre>Is the floppy in the Drive ready?</pre> <p>Insert the floppy disk: <b>RPG Adaptation Data</b>, (or <b>MSCF Adaptation Data</b> for DoD and FAA sites) and enter: <b>y&lt;CR&gt;</b></p>	System starts to mount floppy.
40	<p>When the following option appears:</p> <pre>Choose the adaptation file to restore: 1. ./adapt0001..<i>site specific info</i> Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</pre> <p>Enter: <b>1&lt;CR&gt;</b></p>	The "site specific info" will consist of the site name and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the floppy supplied with the kit.
<p style="text-align: center;"><b>NOTES</b></p> <p>System time should be checked/set to ensure accurate system operation. Steps 41 and 42 provide guidance for performing this action prior to system reboot.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		
41	<p>When the following options appear:</p> <pre>MSCF Installation Done! Please [q]uit menu to reboot. Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</pre> <p>Enter: <b>4&lt;CR&gt;</b> to go into the Utilities Menu, then enter: <b>1&lt;CR&gt;</b> to get to a shell prompt</p>	<p>Adaptation data successfully retrieved from media.</p> <p>For DoD and FAA sites, the prompt will start as: Distant MSCF installation done!</p>

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
42	<p>Verify the displayed date/time appears accurate within one minute. At the # prompt, enter: <b>date&lt;CR&gt;</b> to redisplay a new date/time. If necessary, set the date/time (GMT) using the procedure in EHB 6-525, Table 4–76 starting at step 3.</p> <p>When completed, at the # prompt, enter: <b>exit&lt;CR&gt;</b> to return to the main load menu.</p>	<p>Allows check/set of system time prior to reboot.</p> <p>For FAA and DoD the MSCF is the master clock. Set this time as accurately as possible. For NWS, the MSCF will get the accurate clock time from the AWIPS.</p>
43	<p>When the following options appear:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: <b>q&lt;CR&gt;</b></p>	<p>This will allow selection of a system reboot.</p>
44	<p>When the following option appears:</p> <p>Do you want to reboot the system?</p> <p>Enter: <b>y&lt;CR&gt;</b></p> <p>Rebooting system make take approximately 2.5 minutes.</p>	<p>Menu will temporarily pop back up and then system reboots. On the first boot, a disk–type error may be noted on a non–existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non–critical and will not occur on subsequent boots.</p>
<p style="text-align: center;"><b>NOTE</b></p> <p>The MSCF is now fully functional and applications are loaded/started. The remaining steps are for setting the root password and loading the EPSS.</p>		

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
45	At the CDE login window, click and hold <b>Options</b> then select <b>Command Line Login</b> . After the three lines of comments there is no prompt.	Will enable login as root outside of the CDE.
46	Enter a <b>&lt;CR&gt;</b>	Necessary to get to a <code>site_name console login:</code> prompt.
47	At the <code>site_name console login:</code> prompt, enter: <b>root&lt;CR&gt;</b>	At this point, the system will not prompt for a root password because it is not yet set at this time.
48	At the # prompt, enter: <b>eject cdrom&lt;CR&gt;</b>	CD-ROM cradle opens.
49	Remove CD-ROM and close cradle. Save the CD-ROM in a safe location.	
50	At the # prompt, enter: <b>passwd&lt;CR&gt;</b>	The system prompts the user to enter a new password.
51	At the <code>New password:</code> prompt, enter the desired <b>root_password&lt;CR&gt;</b>	The system prompts the user to re-enter the new password.
52	At the <code>Re-enter new password:</code> prompt, re-enter the desired <b>root_password&lt;CR&gt;</b>	Indicates the password was successfully changed for root.
53	Open the CD-ROM drive at the MSCF, place the CD-ROM labeled " <b>ORPG EPSS File...use with ORPG Build 2.0</b> " into the CD-ROM drive and close the cradle.	
54	At the # prompt, enter: <b>cd /usr/local/bin&lt;CR&gt;</b>	Changes to the directory where local executables are stored.
55	At the # prompt, enter: <b>./install_epss.ksh&lt;CR&gt;</b>	Starts the script to install the EPSS.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
56	<p>When the message appears:</p> <pre>Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q]</pre> <p>Enter: <b>y&lt;CR&gt;</b></p> <p>Takes approximately 2.5 minutes. When the EPSS installation is complete the # prompt returns.</p>	<p>Installs the EPSS to provide on-line operator help screens. The EPSS icon (of an RDA tower and shelter with a question mark) will be placed on the left side of the Control Panel on the next login as a normal user.</p>
57	<p>At the # prompt, enter: <b>eject cdrom&lt;CR&gt;</b></p>	<p>CD-ROM cradle opens.</p>
58	<p>Remove the CD-ROM and close the cradle. Save the CD-ROM in a safe location.</p>	
59	<p>At the # prompt, enter: <b>eject&lt;CR&gt;</b></p>	<p>The floppy disk does not automatically eject from the floppy drive.</p>
60	<p>When the message appears:</p> <pre>/vol/dev/rdiskette0 /...</pre> <p>The diskette can now be manually ejected. Press the button on the right side of the diskette drive and remove the diskette.</p>	
61	<p>At the # prompt, enter: <b>exit&lt;CR&gt;</b></p> <p>System returns to the CDE login window after approximately 30 seconds.</p>	
62	<p>Log into the CDE as a normal user. However, <b>do not open an HCI display</b> as the MSCF is not compatible with the RPG until both have Build 2.0 loaded.</p>	<p>When logging into the CDE at the MSCF, an MSCF Display should automatically start.</p>

ATTACHMENT 1 (Continued)

MSCF SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
<p style="text-align: center;"><b>NOTE</b></p> <p>All normal user accounts have been set up with a default CDE “look” which includes one console window, one terminal window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, then log out of CDE to save the new desktop “look”. Inform all users that when they start the EPSS with the icon on the Control Panel, they should use Netscape’s Edit Preferences option to set both the Fixed and Variable Width fonts to Application (Dt) Size 12. Refer to EHB 6–526 Operations Instructions for specific procedures concerning setup and use of the EPSS.</p>		
63	<p>If you have a remote MSCF perform the following steps. If not skip to the note below. At the <code>user:</code> prompt, enter: <b>remote_mscfserver&lt;CR&gt;</b></p>	<p>This temporarily starts the Remote MSCF Server application which can later be used to display graphical MSCF windows at a “remote MSCF” location (e.g., the RDA RDA/RPG Remote Access Terminal (RRRAT)). At this point, it will only be temporarily started to set a password.</p>
64	<p>At the Remote MSCF Server application Password: prompt, enter the desired site-unique password. At the Verify: prompt, reenter the same password.</p>	<p>The site System Administrator will normally control this password. After setting the password, the Remote MSCF Server is not actually running. When actually needed for remote graphical access, it will be restarted through a remote terminal session.</p>
<p style="text-align: center;"><b>NOTES</b></p> <p>If it necessary to restore the user accounts (data only), use procedures specified in EHB 6-525, Table 4-68.</p> <p><a href="#">ATTACHMENT 2</a> must be completed before verifying if the MSCF is operational. Since the RPG is currently running at Software Build 1.2, the MSCF will not be compatible with the RPG.</p> <p>The MSCF is now operational. If the MSCF is not operational, call the ROC Hotline at (800)643-3363</p>		

**ATTACHMENT 2**

**ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

**Tools Required:**

**Required items for router setup using the RPGPCA**

I/O Panel J8 Port  
Cisco Cable # 72-0876-01 or 72-1259-01  
\* RJ45-DB25(F) adapter #2300027-301

\* If this adapter is not available, it can be replaced by the RJ45-DB9(F) adapter (Cisco 74-0495-01), DB9 male gender changer, and the 10 foot DB9(F)-DB25(M) serial cable (Black Box EVMBMC-0010). If this combination is used, when referenced below, it should be connected to I/O panel J7 instead of J8. Also, when activated with a tip session, use `/dev/cua/1` instead of `/dev/cua/3`.

**Technical Manuals Required:**

Maintenance Instructions, Radar Product Generator (RPG), dated August 1, 2001  
NWS: EHB 6-525  
DoD: AF TO 31P1-4-108-452-1  
FAA: Order 6345.1 V49

**Material Required:**

1 new 3 1/2-inch formatted floppy disk

**Initial Conditions:**

None

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

NOTES

The MSCF is the operating position for the WSR-88D radar. If the MSCF is remote from the RPG, the load dates for the RPG and MSCF must be coordinated. The MSCF operator will require sufficient lead time to record and print all site unique meteorological adaptable parameter screens, site unique generation and distribution lists parameter screens, the authorized dial user list screen, and the dial-in port password screen. This data must be re-entered by the MSCF operator upon completion of the Build 2.0 load for both MSCF and RPG, because there is no merge forward capability for RPG adaptation data at this time.

If the following full system software load is aborted on the RPG for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts in accordance with NWS EHB 6-525, AF TO 31P1-4-108-452-1, and FAA Order 6345.1 V49, Table 4-82 after the full software load is successfully completed.

If the screen is blank and this is being performed at the RPG workstation in the RPGPCA, Raritan user must be selected. Activate mouse and use the on-screen menus to log in as **raritan<CR>** user (no password) or, if a screen saver is not active yet, press the **<Scroll Lock>** key twice quickly to activate the on-screen menus. Then select the RPG user channel.

Step	Action/Procedure	Response/Comments
1	Login as a regular user.	
2	Open a MSCF window.	
3	Click on <b>RPG HCI</b> button to open an HCI window.	
4	Send out a free text message using the <b>Console Messages</b> window to <b>All</b> destinations both <b>Other</b> and <b>Class 1</b> stating the radar will be down for approximately 2 hours for Build 2.0 software loading.	
5	Close the <b>Console Messages</b> , the HCI and the MSCF windows.	
6	Open a Terminal window. At the <b>user:</b> prompt, enter: <b>save_adapt_floppy&lt;CR&gt;</b>	This starts the RPG adaptation data save program.



NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
7	<p>When the following messages appear:</p> <p>---&gt; Saving Adaptation Data ---&gt; Insert a new floppy into the floppy drive ---&gt; Hit return when ready</p> <p>Insert a new floppy disk, then enter <b>&lt;CR&gt;</b></p>	<p>This continues the RPG adaptation data save program.</p>
8	<p>When the following messages appear:</p> <p>---&gt; Mounting floppy ---&gt; Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data</p> <p>User is returned to the user: prompt.</p>	<p>This completes the RPG adaptation data save for Build 1.2.</p>
9	<p>Manually press the button on the front of the floppy drive to eject the floppy disk.</p>	<p>Ejects floppy.</p>
10	<p>Remove the disk, move the write protect tab to the write protect position, and label the floppy disk with the following information: Build 1.2 Date the backup was made Site ID</p> <p>Store this floppy in a safe location.</p> <p>This floppy disk <b>WILL NOT</b> be used again in these procedures.</p>	<p>This floppy should only be used if Software Build 1.2 is reloaded.</p>

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
<p style="text-align: center;"><b>NOTES</b></p> <p>The full system load script will automatically backup user IDs and passwords should backup data from these account directories need to be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc).</p> <p>Backup/restoral of user account data is not mandatory. However, if there are important logs or graphic screen captures stored in the user account directories and if these need to be retained, then backup the RPG user account directories using the procedures specified in EHB 6-525, Table 4-61, AFTO 31P1-4-108-452-1, FAA 6345.1 V49.</p>		
11	Close all windows and terminals.	This leaves the user at the CDE level.
12	Exit out of Common Desktop Environment (CDE) by clicking <b>EXIT</b> on the CDE Control Panel and <b>OK</b> at the confirmation window.	This leave the CDE and the CDE login reappears.
<p style="text-align: center;"><b>NOTES</b></p> <p>Steps 11 through 12 contain methods to halt the system in a normal manner.</p> <p>Should these methods not work (possible system corruption), press the Standby button on the front of the Ultra 5/10 processor assembly (below green power LED) and wait 30 seconds. If the system still will not shutdown, use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <b>&lt;Stop&gt;A</b> to stop the boot process.</p>		
13	<p>Push the standby button below the green power led on the front of the RPG processor.</p> <p>Wait until the ok prompt appears which will take approximately 70 seconds.</p>	No immediate response for approximately 50 seconds, then another 20 seconds to complete the shutdown. Halts the system and system goes to an ok prompt.
14	Open the CD-ROM drive at the RPG, place the CD-ROM labeled, " <b>ORPG Load Version 2.0</b> ", in the CD-ROM drive and close the cradle.	Your site received two copies of identical software. Either copy can be used.
15	At the ok prompt, enter: <b>set-defaults&lt;CR&gt;</b>	Ensures all NVRAM settings are returned to default values.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
16	At the ok prompt, enter: <b>boot cdrom&lt;CR&gt;</b>	Boots the CD-ROM disk. Some disk errors may be noted; however, they are not relevant at this point. Disregard the hsfs mount failed, trying ufs... message.
17	In approximately 5 minutes, when the following option appears:  Choose System Type to Load: 1 RPG 2 MSCF 3 BDDS 4 Utilities  Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]  Enter: <b>1&lt;CR&gt;</b>	Indicates Installing RPG System...
18	When the following options appear:  Please enter the radar's site call letter (type 'help' for list):  Enter the appropriate four letter site mnemonic (in lower case) and press <b>&lt;CR&gt;</b> .  <b>NWS and DoD:</b> Proceed to step 20 while the software is loading. <b>FAA:</b> proceed to the next step.	Enter <b>help&lt;CR&gt;</b> to see a list of site mnemonics if it is unclear about which mnemonic to use.  System responds with the system type, network number, and netmask. For example:  System Type is: RPG Network is: 172.25.171.0 Subnet Mask is: 255.255.255.128
19	<b>For FAA only:</b> Enter: <b>1&lt;CR&gt;</b> or <b>2&lt;CR&gt;</b>  Depending on the channel being loaded. Proceed to next step while software is loading.	

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
20	While the software is loading, cycle the power switch off for five seconds and then back on at the rear of all three communication servers (UD70/170A15, A16 and A17).	This is necessary to allow for the communication servers to upload new internal operating software if it changed on the RPG processor as part of the new software load. The upload will not actually occur until the RPG processor itself is booted in subsequent steps (but still before the RPG applications software starts).
<p style="text-align: center;"><b>NOTES</b></p> <p>The installation will start and take approximately 25 minutes to complete.</p> <p>If the screen is timed out and this is being performed at the RPG workstation in the RPGPCA, Raritan user must be selected. Activate mouse and use the on-screen menus to log in as <b>raritan&lt;CR&gt;</b> user (no password) or, if a screen saver is not active yet, press the <b>&lt;Scroll Lock&gt;</b> key twice quickly to activate the on-screen menus. Then select the RPG user channel.</p>		
21	<p>When the following option appears:</p> <p>Do you want to restore an adaptation archive from CD or floppy for SITE_NAME?</p> <p>Yes or No [y,n,?,q]</p> <p>Enter: <b>y&lt;CR&gt;</b></p>	SITE_NAME is the site being loaded at the time (site mnemonic kxxx or pxxx).

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
22	<p>When the following option appears:</p> <p>Choose the adaptation archive media to restore from:</p> <p>1 Floppy 2 CD (current install CD)</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]</p> <p>Enter: <b>1&lt;CR&gt;</b></p>	<p>At this time, adaptation data can only be restored from a floppy. Use the floppy disk titled, "<b>RPG Adaptation Data</b>", fourth line: "<b>Version: 2.0</b>" provided in the kit.</p> <p>Floppy selected.</p>
23	<p>When the following option appears:</p> <p>Is the floppy in the drive and ready?</p> <p>yes or No [y,n,?,q]</p> <p>Insert the "<b>RPG Adaptation Data</b>" floppy in the floppy drive and then enter: <b>y&lt;CR&gt;</b></p>	<p>System starts to mount floppy.</p>

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
24	<p>When the following option appears:</p> <pre>Trying to mount floppy...</pre> <p>Choose the adaptation file to restore:</p> <pre>1  ./adapt00001.site specific info 2  ./adapt00001.site specific info 3  " 4  " 5  etc.</pre> <p>Enter numeric selection from Above, q to Quit for ? for Help: [?,?,q]</p> <p>Enter: <b>1&lt;CR&gt;</b> (For FAA, enter either 1 or 2 depending upon channel being loaded)</p>	<p>The <i>site specific info</i> will consist of the site name and the date/time when the adaptation data file was created at the ROC. This diskette is not a site backup. This is the floppy supplied with the kit.</p>
<p style="text-align: center;"><b>NOTES</b></p> <p>System time should be checked/set to ensure accurate system operation. Steps 25 and 26 provide guidance for performing this action prior to system reboot. In NWS configurations the clock will be synchronized with AWIPS. DoD and FAA configurations, the clock will be synchronized with the MSCF.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		

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ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
25	<p>When the following option appears:</p> <p>Adaptation data successfully received from media</p> <p>RPG Installation Done! Please [q]uit menu to reboot.</p> <p>Choose System Type to Load:</p> <ul style="list-style-type: none"> <li>1 RPG</li> <li>2 MSCF</li> <li>3 BDDS</li> <li>4 Utilities</li> </ul> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: <b>4&lt;CR&gt;</b> to go into the Utilities Menu, then enter: <b>1&lt;CR&gt;</b> to get to a shell prompt.</p>	The adaptation data successfully retrieved from the media.
26	<p>Verify the displayed date/time appears accurate within one minute. At the # prompt, enter: <b>date&lt;CR&gt;</b> to redisplay a new date/time. If necessary, set the date/time (GMT) using the procedures in EHB 6-525, Table 4-76 starting at step 3.</p> <p>When completed, enter: <b>exit&lt;CR&gt;</b> to return to the main load menu.</p>	Allows check/set system time prior to reboot.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
27	<p>When the following option appears:</p> <pre>Choose System Type to Load:   1  RPG   2  MSCF   3  BDDS   4  Utilities</pre> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:</p> <p>Enter: <b>q&lt;CR&gt;</b></p>	This will allow selection of a system reboot.
28	<b>For FAA sites only:</b> From the HCI RPG Control window, Shutdown the other RPG to OFF. This will prevent transferring of adaptation data between channels.	
29	<p>When the following message appears:</p> <pre>Do you want to reboot the system?</pre> <p>Enter <b>y&lt;CR&gt;</b> to the following question:</p> <p>In approximately 2.5 minutes the CDE login window appears.</p>	Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.
30	At the CDE login window, click and hold <b>Options</b> then select <b>Command Line Login</b> . After three lines of comments appear, there is no prompt.	Will enable login as root outside of the CDE.
31	Enter a <b>&lt;CR&gt;</b>	Necessary to get to a site_name console login: prompt.
32	At the site_name console login: prompt, enter: <b>root&lt;CR&gt;</b>	At this point, the system will not prompt for a root password because it is not yet set at this time.
33	At the # prompt, enter: <b>eject cdrom&lt;CR&gt;</b>	CD-ROM cradle opens.
34	Remove the CD-ROM, close the cradle, and store the CD-ROM in a safe location.	



NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
35	At the # prompt, enter: <b>eject&lt;CR&gt;</b>	This will start the ejection of the RPG Adaptation floppy disk. The floppy disk does not automatically eject from the drive.
36	When the message appears  /vol/dev/rdiskette0 /...  The diskette can now be manually ejected. Push the button on the right of the disk drive, remove the diskette, and save it in a safe location.	
37	At the # prompt, enter: <b>passwd&lt;CR&gt;</b>	The system prompts the user to enter a new password.
38	At the New password: prompt, enter the desired <i>root password&lt;CR&gt;</i>	The system prompts the user to re-enter the new password.
39	At the Re-enter new password: prompt, re-enter the desired <i>root password&lt;CR&gt;</i>	Should indicate the password was successfully changed for root.
40	Open the CD-ROM drive at the RPG, place the CD-ROM labeled " <b>ORPG EPSS File... use with ORPG Build 2.0</b> " into the CD-ROM and close the cradle.	
41	At the # prompt, enter: <b>cd /usr/local/bin&lt;CR&gt;</b>	Changes to the directory where local executables are stored.
42	At the # prompt, enter: <b>./install_epss.ksh&lt;CR&gt;</b>	Starts the script to install the EPSS.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
43	<p>When the message appears:</p> <p>Do you want to install EPSS on this system's hard drive? Yes or No [y, n, ?,q]</p> <p>Enter: <b>y&lt;CR&gt;</b></p> <p>Takes approximately 2.5 minutes. When the EPSS installation is complete the # prompt appears.</p>	<p>Installs the EPSS to provide on-line operator help screens. The EPSS icon (of an RDA tower and shelter with a question mark) will be placed on the left side of the Control Panel on the next login as a normal user.</p>
44	<p>At the # prompt, enter: <b>eject cdrom&lt;CR&gt;</b></p>	<p>CD-ROM cradle opens.</p>
45	<p>Remove the CD-ROM and close the cradle. Save the CD-ROM in a safe location.</p>	
46	<p>At the # prompt, enter: <b>exit&lt;CR&gt;</b></p>	<p>System returns to the CDE login window after approximately 30 seconds.</p>
47	<p>At the RPG processor, if a CDE Desktop Login screen is present, login as the normal user, open an MSCF and open an RPG HCI.</p>	
48	<p>The RPG is now operational. If the RPG is not operational, call the ROC Hotline at (800)643- 3363.</p>	
49	<p>The RDA is in standby. Click on the <b>RDA Control</b> button and click on <b>Operate</b>.</p>	<p>The radar is now operating.</p>

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
<p style="text-align: center;"><b>NOTES</b></p> <p>The router now must be changed to handle future configurations for the OPUP.</p> <p>Prerequisite for using the Radar Product Generation Processor Communications Assembly (RPGPCA) for setup: The Router (UD70A2) is installed and connected to the LAN Switch (UD70A13) in its normal manner. The RPG processor is fully loaded, operational and connected to the LAN Switch (UD70A13) in its normal manner within the RPGPCA cabinet UD70.</p> <p>The next step requires input of the site-specific IP address from the RPG processor. If this number is not known, at any prompt enter the following: <b>more /etc/hosts&lt;CR&gt;</b> and put the <i>Third Octet Subnet</i> number (found near the top of the hosts file) in the blank below:</p> <p style="text-align: center;">172.25._____.1</p> <p>For FAA redundant channel 2, the IP address will have the form:</p> <p style="text-align: center;">172.25._____.71</p>		
50	Using the router and RPGPCA setup: Plug the Cisco cable into the CON port at the front of the Cisco 3640 Router.	See Tools Required list at the beginning of <a href="#">ATTACHMENT 2</a> .
51	Attach the RJ45–DB25(F) adapter to the free end of the Cisco cable.	
52	Plug the free end of the RJ45–DB25(F) adapter into the I/O Panel J8 port. This port is in the bottom eight inch section of the left hand cabinet as you face the back of the cabinets.	
53	At a <code>user:</code> prompt in the terminal window, enter: <b>tip -9600 /dev/cua/3&lt;CR&gt;</b>	
54	After the <code>connected</code> feedback appears, enter a <b>&lt;CR&gt;</b> to finish establishing the connection.	A prompt should appear. If there no prompt, verify the routing of the J8 I/O panel reference EHB 6-525, figure FO7-4, titled “RPG-PCA Data Cables”. Cable W253 goes from J8 to PCI board 2 port 3 (fourth one down on the bottom).

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
55	Continue with step 56 to complete the configuration procedure.	
<p style="text-align: center;"><b>NOTE</b></p> <p>For simplicity with this procedure the possible <i>hostname</i> (<b>rtr</b>, <b>rtr1</b>, or <b>rtr2</b>) is referred to as <b>rtr</b> for the remainder of this procedure. When an entry requires the router <i>hostname</i>, the user needs to enter the appropriate hostname as directed by the procedure.</p>		
56	<p>If prompted, enter: <i>site-selected-password</i></p> <p>If this is a new box that may have been previously tested by NRC, it will either have no password set for the CONSOLE port or will use a default password of <b>cisco</b>.</p>	
57	At the <b>rtr&gt;</b> prompt enter: <b>enable&lt;CR&gt;</b>	
58	<p>If prompted, enter: <i>site-selected-password</i></p> <p>If this is a new box that may have been previously tested by NRC, it will either have no password set for the “enable” level or will use a default password of <b>cisco</b>.</p>	
<p style="text-align: center;"><b>CAUTION</b></p> <p>Upon completion of steps 59 through 61, if power is removed without successful completion of steps 62 through 67 the firmware within the Router <b>will become corrupted</b> (signified by a <b>router:</b> prompt) and a new Router must be ordered.</p>		
59	At the <b>rtr#</b> prompt, enter: <b>erase startup-config&lt;CR&gt;</b>	
60	<p>When the following message appears:</p> <p>Erasing the nvram filesystem will remove all files! Continue? [confirm]</p> <p>Enter a <b>&lt;CR&gt;</b></p>	[OK] will appear.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
61	Wait for feedback:  Erase of nvram: complete and the rtr# prompt reappears.	
62	At the rtr# prompt, enter:  <b>copy tftp://172.25.===.1/c3640.bin flash:&lt;CR&gt;</b>  For FAA channel 2, enter: <b>copy tftp://172.25.===.71/c3640.bin flash:&lt;CR&gt;</b>  Enter the correct subnet referencing the hosts file.	The IP address is the RPG processor IP Address and === is the site-specific subnet number. Refer to note before step 50 for the site-specific subnet ID.
63	When the following message appears:  Destination filename [c3640.bin] ?  Enter a <b>&lt;CR&gt;</b>	
64	When the following message appears:  %Warning: There is a file already existing with this name Do you want to over write? [confirm]  Enter a <b>&lt;CR&gt;</b>	
65	When the following message appears:  Accessing tftp://172.25.===.1/ c3640.bin... Erase flash: before copying? [confirm].  Enter a <b>&lt;CR&gt;</b>	For FAA channel 2, the following message will appear:  Accessing tftp:// 172.25.===.71/c3640.bin... Erase flash: before copying? [confirm].
66	When the following message appears:  Erasing the flash filesystem will remove all files! Continue? [confirm]  Enter a <b>&lt;CR&gt;</b>	The message Erasing device... will be displayed.

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
67	Wait for approximately 30 seconds while the older file is erased and newer file loads. Ensure the <code>Verifying checksum...OK</code> message appears followed by the <code>rtr#</code> prompt before cycling power in the next step. If <code>Verifying checksum...OK</code> does not appear, repeat steps 62 through 67 before continuing.	
68	Cycle power to the Router (A2) by manually turning the power switch Off/On.  Once power is returned to the Router, it reloads the default software taking approximately 45 seconds. When complete, the last line of feedback states: <code>--- System Configuration Dialog ---</code> .	
<p style="text-align: center;"><b>NOTE</b></p> <p style="text-align: center;">Throughout this procedure, the Router state is changed and feedback messages are presented while the user is trying to complete entries. To return to an entry prompt, press <b>&lt;CR&gt;</b>.</p>		
69	When the following message appears:  <code>Would you like to enter initial configuration dialog? [yes/no]:</code>  Enter: <b>n&lt;CR&gt;</b>	
70	If the following message appears:  <code>Would you like to terminate autoinstall? [yes]:</code>  Enter <b>&lt;CR&gt;</b> otherwise skip to step 71.	
71	Numerous state change messages will be noted at this time. Wait approximately 30 seconds until the messages stop displaying before continuing.	
72	Enter a <b>&lt;CR&gt;</b>	The Router> prompt appears.

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ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
73	At the Router> prompt, enter: <b>enable&lt;CR&gt;</b>	The prompt changes to Router#.
74	At the Router# prompt, enter: <b>config t&lt;CR&gt;</b>	The prompt changes to Router (config) #.
75	At the Router (config) # prompt, enter: <b>bridge irb&lt;CR&gt;</b>	
76	At the Router (config) # prompt, enter: <b>bridge 1 protocol ieee&lt;CR&gt;</b>	
77	At the Router (config) # prompt, enter: <b>bridge 1 route ip&lt;CR&gt;</b>	
78	At the Router (config) # prompt, enter: <b>int bvi1&lt;CR&gt;</b>	The prompt changes to Router (config-if) #.
79	State Changes may be noted. If this happens, wait approximately 30 seconds until the state changes stop, then enter: <b>&lt;CR&gt;</b> to continue.	
80	Enter the IP address command string, dependent on system and/or channel. For Single channel or FAA Redundant Channel 1, at the router (config-if) # prompt, enter: <b>ip address 172.25.===.7 255.255.255.128&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see hosts file). Refer to note before step 50 for the site-specific subnet ID.
81	For FAA Redundant Channel 2 only, at the router (config-if) # prompt, enter: <b>ip address 172.25.===.77 255.255.255.128&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see host file). Refer to note before step 50 for the site-specific subnet ID.
82	At the Router (config-if) # prompt:  Enter: <b>exit&lt;CR&gt;</b>	Prompt changes to Router (config) #.
83	At the Router (config) # prompt, enter: <b>int f0/0&lt;CR&gt;</b>	This starts the configuration of the Ethernet port. The prompt changes to Router (config-if) #.
84	At the Router (config-if) # prompt, enter: <b>bridge-group 1&lt;CR&gt;</b>	

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
85	At the Router(config-if)# prompt, enter: <b>no shutdown&lt;CR&gt;</b>  Wait about 30 seconds for the router to change its status.	
86	State Changes may be noted. If this happens, wait approximately 30 seconds until the state changes stop, then enter: <b>&lt;CR&gt;</b> to continue.	
87	At the Router(config-if)# prompt, enter: <b>end&lt;CR&gt;</b>	The prompt changes to Router#.
88	When the message appears:  Configured from console by console.  Enter: <b>&lt;CR&gt;</b>	
89	At the Router# prompt, enter: <b>write mem&lt;CR&gt;</b> to save the entries.	Wait a few seconds for the router to update and the Router# prompt returns.
90	At the Router# prompt, enter: <b>copy tftp running-config&lt;CR&gt;</b>	Feedback: Address or name of remote host []? will appear.
91	For NWS, DOD, or FAA Redundant Channel 1 at the Address or name of remote host []? prompt:  Enter: <b>172.25.===.1&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see hosts file).
92	For FAA Redundant Channel 2, at the Address or name of remote host []? prompt:  Enter: <b>172.25.===.71&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see hosts file).



NWS: EHB-6, Software Note 19  
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ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
93	When the message appears:  Source filename []?  Enter: <b>rtr-template&lt;CR&gt;</b>	
94	When the message appears:  Destination filename [running-config]?  Enter: <b>&lt;CR&gt;</b>	
<p style="text-align: center;"><b>NOTE</b></p> <p>The router proceeds with the upload. Error messages noted for non-installed modules are normal. Also, link state change messages may be noted. After approximately 30 seconds of no more state changes a <code>rtr#</code> prompt appears (may need to enter: <b>&lt;CR&gt;</b> to return to a prompt). Prompt would be <code>rtr1#</code> for an FAA redundant channel 1 system, or <code>rtr2#</code> for FAA redundant channel 2.</p>		
95	At the <code>rtr#</code> prompt enter: <b>copy tftp running-config&lt;CR&gt;</b>	Message Address or name of remote host []? appears.
96	For NWS, DOD, or FAA Redundant Channel 1, at the Address or name of remote host [172.25.===.1]? prompt:  Enter: <b>172.25.===.1&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see hosts file).
97	For FAA Redundant Channel 2, at the Address or name of remote host [172.25.===.71]? prompt:  Enter: <b>172.25.===.71&lt;CR&gt;</b>	Where === is the site-specific subnet ID (see hosts file).

ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
98	<p>When the message below appears</p> <p>Source filename [rtr-template]?</p> <p>Depending on user's agency, enter:</p> <p><b>faa-specific&lt;CR&gt;</b> or <b>dod-specific&lt;CR&gt;</b> or <b>nws-specific&lt;CR&gt;</b></p>	
99	<p>When the message below appears:</p> <p>Destination filename [running-config]?</p> <p>Enter: <b>&lt;CR&gt;</b></p>	
<p style="text-align: center;"><b>NOTE</b></p> <p>The router proceeds with the upload. Error messages noted for non-installed modules are normal. Also, link state change messages may be noted. After 30 seconds of no more state changes a <code>rtr#</code> prompt appears (may need to enter: <b>&lt;CR&gt;</b> to return to a prompt). Prompt would be <code>rtr1#</code> for an FAA redundant channel 1 system, or <code>rtr2#</code> for FAA redundant channel 2.</p>		
<p style="text-align: center;"><b>NOTE</b></p> <p>Several passwords are assigned for the Router's various ports. To make the management of these passwords simpler for the user, using the same <i>site-selected-password</i> is suggested.</p>		
100	<p>At the <code>rtr#</code> prompt, enter: <b>config t&lt;CR&gt;</b></p>	<p>The following message appears:</p> <p>Enter configuration commands, one per line. End with CNTL/Z.</p> <p>The prompt changes to <code>rtr(config)#</code>.</p>
101	<p>At the <code>rtr(config)#</code> prompt, enter: <b>no enable password&lt;CR&gt;</b></p>	

NWS: EHB-6, Software Note 19  
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ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
102	At the <code>rtr(config)#</code> prompt, enter: <b>service password-encryption&lt;CR&gt;</b>	
103	At the <code>rtr(config)#</code> prompt, enter: <b>enable password site-selected-password&lt;CR&gt;</b> Make note of the password for future use.	
104	At the <code>rtr(config)#</code> prompt, enter: <b>line vty 0 4&lt;CR&gt;</b>	The prompt changes to <code>rtr(config-line)#</code> .
105	At the <code>rtr(config-line)#</code> prompt, enter: <b>login&lt;CR&gt;</b>	
106	At the <code>rtr(config-line)#</code> prompt, enter: <b>password site-selected-password&lt;CR&gt;</b> Make note of the password for future use.	
107	At the <code>rtr(config-line)#</code> prompt, enter: <b>line con 0&lt;CR&gt;</b>	
108	At the <code>rtr(config-line)#</code> prompt, enter: <b>login&lt;CR&gt;</b>	
109	At the <code>rtr(config-line)#</code> prompt, enter: <b>password site-selected-password&lt;CR&gt;</b> Make note of the password for future use.	
110	At the <code>rtr(config-line)#</code> prompt, enter: <b>line aux 0&lt;CR&gt;</b>	
111	At the <code>rtr(config-line)#</code> prompt, enter: <b>login&lt;CR&gt;</b>	
112	At the <code>rtr(config-line)#</code> prompt, enter: <b>password site-selected-password&lt;CR&gt;</b> Make note of the password for future use.	
113	At the <code>rtr(config-line)#</code> prompt, enter: <b>exit&lt;CR&gt;</b>	The prompt changes to <code>rtr(config)#</code> .
114	At the <code>rtr(config)#</code> prompt, enter: <b>no service password-encryption&lt;CR&gt;</b>	
115	At the <code>rtr(config)#</code> prompt, enter: <b>end&lt;CR&gt;</b>	

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ATTACHMENT 2 (Continued)

ORPG SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	Action/Procedure	Response/Comments
116	When the message below appears:  Configured from console by console.  Enter: <b>&lt;CR&gt;</b>	The prompt changes to rtr#.
117	At the rtr# prompt, enter: <b>write mem&lt;CR&gt;</b> to save the entries.	
118	At the rtr# prompt, enter: <b>exit&lt;CR&gt;</b> to exit.	
119	The message:  Press Return to get started will appear, but there is no prompt  Enter: ~ . (tilde-dot)	EOT is displayed and the user is returned to a user: prompt.
120	Unplug the data cable I/O Panel J8 Port and Cisco Router that was connected at the beginning of this procedure.	
121	The RPG load is complete.	
122	<b>For FAA sites:</b> Repeat this entire attachment for the other channel.	

**ATTACHMENT 3**

**BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS**

**Technical Manuals Required:**

Maintenance Instructions, Radar Product Generator (RPG), dated August 1, 2001  
NWS: EHB 6-525  
DoD: AF TO 31P1-4-108-452-1  
FAA: Order 6345.1 V49

**Initial Condition**

This procedure can be performed while the radar is operational.

**NOTE**

If the following full system software load is aborted on the BDDS for any reason, all user accounts will be lost. Do not intentionally abort the load. If the load aborts for any reason, reestablish all user accounts IAW EHB 6-525, Table 4-82 after the full software load is successfully completed. If this is a new replacement processor or fixed disk, user accounts must also be reestablished after the load IAW EHB 6-525, Table 4-82.

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
<b>NOTES</b>		
<p>If this is being performed at a local BDDS workstation (installed in RPGPCA cabinets), Raritan user channel 2 (BDDS) must be selected. Activate mouse and use the on-screen menus to log in as <b>raritan&lt;CR&gt;</b> user (no password) or, if a screen saver is not active yet, hit the <b>&lt;Scroll Lock&gt;</b> key twice quickly to activate the on-screen menus. Then select the BDDS user channel.</p> <p>The full system load script will automatically backup user IDs and passwords should backup data from these account directories be restored later. The system full load script will also create new home directories for all users with the current environment file (.cshrc) in-place so backup/restoral of user account data is not mandatory.</p>		

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
<p style="text-align: center;"><b>NOTE</b></p> <p>Steps 1 through 3 contain methods to halt a system in a normal manner. Should these methods not work (possible system corruption), press the Standby button on the front of the Ultra 5/10 processor assembly (below green power LED) and wait 30 seconds. If the system still will not shutdown, use the power switch at the rear of the unit and power the processor off for five seconds and back on to reboot it. Then enter <b>&lt;Stop-A&gt;</b> after it starts to boot to stop the boot process. Then proceed to step 5.</p>		
1	If at a CDE Login window proceed to step 3. If within the CDE continue with the next step.	
2	Exit out of Common Desktop Environment (CDE) by clicking <b>EXIT</b> on the CDE Control Panel and <b>OK</b> at the acknowledgement window.	Leave the CDE.
3	Push the standby button on the front of the BDDS Processor. Proceed to step 5.  Takes approximately 20 seconds to complete the shutdown.	Halts the system and the system goes to an ok prompt.
4	If the system was powered off, then power the system on, and enter <b>&lt;Stop&gt;A</b> (i.e., simultaneously press the <Stop> and A keys) when the system starts to boot.	An ok prompt will appear.
5	Open the CD-ROM drive, place the CD-ROM labeled " <b>ORPG Load Version 2.0</b> " in the CD-ROM drive and close the cradle.	
6	At the ok prompt, enter: <b>set-defaults&lt;CR&gt;</b>	This ensures all NVRAM settings are returned to default values.
7	At the ok prompt, enter: <b>boot cdrom&lt;CR&gt;</b>	This boots the CD-ROM disk. Some disk check errors may be noted; however, they are not relevant at this point. Disregard the <code>hsfs mount failed, trying ufs ... message</code> .

NWS: EHB-6, Software Note 19  
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FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
<p style="text-align: center;"><b>NOTE</b></p> <p>If the load starts and it is then realized that an incorrect entry was made, let the software complete its load and then start this procedure over from the beginning. If the load is aborted while in progress, all user accounts will be lost.</p>		
8	<p>In approximately 5 minutes when the following options appear:</p> <p>Choose System Type to Load:</p> <p>1 RPG 2 MSCF 3 BDDS 4 Utilities</p> <p>Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q] :</p> <p>Enter: <b>3&lt;CR&gt;</b></p>	<p>Indicates Installing BDDS System...</p>
9	<p>When the following option appears:</p> <p>Please enter the radar's site call letters (type 'help' for list):</p> <p>Enter the appropriate four letter site mnemonic (in lower case) and press <b>&lt;CR&gt;</b>.</p> <p>The installation will start and it will take approximately 25 minutes to complete.</p>	<p>Enter <b>help&lt;CR&gt;</b> to see a list of site mnemonics if it is unclear about which mnemonic to use.</p> <p>System responds with the system type, network number, and netmask. For example:</p> <p>System Type is: BDDS Network is: 172.25.171.0 Subnet Mask is: 255.255.255.128</p>
<p style="text-align: center;"><b>NOTE</b></p> <p>System time should be checked/set to ensure accurate system operation. Steps 10 and 11 provide guidance for performing this action prior to system reboot.</p>		

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
10	<p>When the following options appear:</p> <pre> BDDS Installation Done! Please [q]uit menu to reboot. Choose System Type to Load:   1 RPG   2 MSCF   3 BDDS   4 Utilities Enter Numeric Selection from Above, q to Quit or ? for Help: [?,??,q]:  Enter: <b>4&lt;CR&gt;</b> to go into the Utilities Menu, then enter: <b>1&lt;CR&gt;</b> to get to a shell prompt when the following options appear: </pre>	
<p style="text-align: center;"><b>NOTES</b></p> <p>Perform the next step even though the BDDS will synchronize with the AWIPS for NWS, or MSCF for DoD, and FAA.</p> <p>The automated synchronization of the clocks will not work correctly if the clocks are more than 1000 seconds apart. When setting the time, ensure the time entered is within the 1000 second rule.</p>		
11	<p>Verify the displayed date/time appears accurate within one minute. At the # prompt, enter: <b>date&lt;CR&gt;</b> to redisplay a new date/time. If necessary, set the date/time (GMT) using the procedure in EHB 6-525, Table 4-76 starting at step 3.</p> <p>When completed, enter: <b>exit&lt;CR&gt;</b> to return to the main load menu.</p>	Allows check/set of system time prior to reboot.



NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
12	<p>When the following options appear:</p> <p>Choose System Type to Load:</p> <p>1 RPG</p> <p>2 MSCF</p> <p>3 BDDS</p> <p>4 Utilities</p> <p>Enter Numeric Selection from Above,</p> <p>q to Quit or ? for Help:</p> <p>[?,??,q]:</p> <p>Enter:</p> <p><b>q&lt;CR&gt;</b></p>	This will allow selection of a system reboot.
13	<p>When the following options appear:</p> <p>Do you want to reboot the system?</p> <p>Enter:</p> <p><b>y&lt;CR&gt;</b></p>	<p>Menu will temporarily pop back up and then system reboots. On the first boot, a disk-type error may be noted on a non-existent disk (e.g., /dev/dsk/c1t4d0s0); however, this error is non-critical and will not occur on subsequent boots.</p>
<p style="text-align: center;"><b>NOTE</b></p> <p style="text-align: center;">The BDDS is now fully functional and applications are loaded/started. No further interaction is required for the BDDS to actually perform its prime function. The remaining steps are for setting the root password and restoring user accounts if desired.</p>		
14	<p>At the CDE login window, click and hold <b>Options</b> then select <b>Command Line Login</b>. After three lines of comments appear, there is no prompt.</p>	Will enable login as root outside of the CDE.
15	<p>Enter a <b>&lt;CR&gt;</b></p>	Necessary to get to a site_name console login: prompt.
16	<p>At the site_name console login: prompt, enter:</p> <p><b>root&lt;CR&gt;</b></p>	At this point, the system will not prompt for a root password because it is not set at this time.
17	<p>At the # prompt, enter:</p> <p><b>eject cdrom&lt;CR&gt;</b></p>	CD-ROM cradle opens.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 3 (Continued)

BDDS SOFTWARE BUILD 2.0 LOAD INSTRUCTIONS

Step	ACTION/PROCEDURE	RESPONSE/COMMENTS
18	Remove CD-ROM and close cradle. Save CD-ROM in a safe location.	
19	At the # prompt, enter: <b>passwd&lt;CR&gt;</b>	The system prompts the user to enter a new password.
20	At the New password: prompt, enter the desired <i>root_password&lt;CR&gt;</i>	The system prompts the user to re-enter the new password.
21	At the Re-enter new password: prompt, re-enter the desired <i>root_password&lt;CR&gt;</i>	Should indicate that the password was successfully changed for root.
22	At the # prompt, enter: <b>exit&lt;CR&gt;</b>  System returns to the CDE login window after approximately 30 seconds.	If it is not necessary to restore any backed-up user accounts (data only), then this procedure is theoretically complete; however, the following Note provides information for setting up the CDE "look" when logging into a normal user account and into the CDE. If it is necessary to restore user accounts (data only), continue with the final step.
<p style="text-align: center;"><b>NOTE</b></p> <p>All normal user accounts have been set up with a default CDE "look" which includes one console window, one terminal window, and one digital clock. Due to variances in monitor sizes and types, the user may need to rearrange these items on the desktop as desired for best viewing. When arranged as desired, log out of CDE to save the new desktop "look".</p>		
<p style="text-align: center;"><b>NOTE</b></p> <p>The BDDS is now operational. If the BDDS is not operational, call of ROC Hotline at (800)643-3363.</p>		

**ATTACHMENT 4**

**MSCF RESTORATION OF ADAPTABLE PARAMETERS AND BACKUPS**

**Technical Manuals Required:**

Maintenance Instructions, Radar Product Generator (RPG), dated August 1, 2001  
NWS: EHB 6-525  
DoD: AF TO 31P1-4-108-452-1  
FAA: Order 6345.1 V49

**Materials Required:**

2 new 3 1/2-inch formatted floppy disks

**Initial Conditions:**

**The MSCF and RPG must have Build 2.0 successfully loaded. For FAA sites, both RPGs must be successfully loaded with Build 2.0.** Have the hardcopies from [ATTACHMENT 1](#) available.

1	Use the hard copies of each adaptable parameters window that were printed in <a href="#">ATTACHMENT 1</a> . At the MSCF display, open an HCI, select each window, and compare the current parameter values with those on the hard copies. When a window is open, click on <b>Padlock</b> , click on <b>URC</b> , and the site adaptable parameters will be highlighted in white. These will be the only values the sites will have to check. If required, edit the URC Level Of Change Authority values of the parameters to match the values on the hard copies. Edit instructions are provided in the Operator Handbook Guidance on Adaptable Parameters, dated August 2002.	
2	<b>For FAA sites only:</b> When changing the values on the adaptable parameters, the new values will cause a mismatch. These mismatches trigger an automatic update to the other channel. Once you are finished with the first channel, verify the Adaptable Parameter button is green and is labeled Match. The RPG status logs will also reflect each automatic update. Open the status logs to both channels and compare the times of the updates.	

ATTACHMENT 4 (Continued)

MSCF RESTORATION OF ADAPTABLE PARAMETERS AND BACKUPS

3	At the <code>user:</code> prompt, enter: <b>save_adapt_floppy&lt;CR&gt;</b>	This starts the MSCF adaptation save program.
4	When the following messages appear:  ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready  Insert a new floppy disk, then enter: <b>&lt;CR&gt;</b>	This continues the MSCF adaptation data save program.
5	When the following messages appear:  ---> Mounting floppy ---> Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data  User is returned to the <code>user:</code> prompt.	This saves this MSCF adaptation data with Build 2.0.
6	At the <code>user:</code> prompt, enter: <b>save_adapt_floppy -o rpg&lt;CR&gt;</b>	This starts the program to save the RPG adaptation data at the MSCF terminal.
7	When the following messages appear: ---> Saving Adaptation Data ---> Insert a new floppy into the floppy drive ---> Hit return when ready  <b>Do not insert a new floppy</b> as the RPG adaptation data will be automatically labeled and dated differently and can be saved on the same floppy as the MSCF adaptation data.  Enter <b>&lt;CR&gt;</b>	This continues the program to save the RPG adaptation data.
8	When the following messages appear: ---> Mounting floppy ---> Saving RPG adaptation data to /floppy/floppy0 Saving RPG adaptation data...  The user is then returned to the <code>user:</code> prompt.	The RPG adaptation data for Build 2.0 is saved to the floppy.

NWS: EHB-6, Software Note 19  
DoD: TO 31P1-4-108-603  
FAA: EEM Modification Handbook 6345.1 CHG 32, Chap 29

ATTACHMENT 4 (Continued)

MSCF RESTORATION OF ADAPTABLE PARAMETERS AND BACKUPS

9	If this is an MSCF off of a FAA redundant system, at the <code>user:</code> prompt enter: <b>save_adapt_floppy -o rpg2&lt;CR&gt;</b>	The feedback responses will be the same as steps 7 and 8. The same floppy can be used to save the channel 2 data.
10	When the <code>user:</code> prompt appears, manually press the button on the floppy drive to eject the floppy.	Ejects floppy.
11	Pull out the floppy, move the write protect tab to the write protect position, and label the floppy disk with the following information: MSCF Adaptation Data Build 2.0 RPG Adaptation Data Build 2.0 Date the backup was made Site ID	
12	Send the new MSCF and RPG Adaptation Data Build 2.0 floppy to the following address:  Radar Operations Center Configuration Management ATTN: Chris Hunt 3200 Marshall Ave Norman, OK 73072-8028	
13	Repeat steps 3 through 11 with a second floppy disk. This disk will be saved at the site.	
14	Store this floppy in a safe location. This floppy will only be used if Software Build 2.0 is reloaded on the MSCF or RPG.	

ATTACHMENT 5

EFFECTIVITY

NWS

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
Eastern Region				
ALBANY	ALBANY, NY	RPG MSCF BDDS	ALY	WN9518
BINGHAMTON	JOHNSON CITY, NY	RPG MSCF BDDS	BGM	WN9515
BOSTON	TAUNTON, MA	RPG MSCF BDDS	BOX	WN9509
BROOKHAVEN	UPTON, NY	RPG MSCF BDDS	OKX	WN9912
BUFFALO	BUFFALO, NY	RPG MSCF BDDS	BUF	WN9528
BURLINGTON	SOUTH BURLINGTON, VT	RPG MSCF BDDS	BTV	WN9617
FT DRUM CARIBOU	SOUTH BURLINGTON, VT CARIBOU, ME	MSCF RPG MSCF	BTV CAR	WN9617 WN9712

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CHARLESTON, SC	CHARLESTON, SC	RPG MSCF BDDS	CHS	WN9208
CHARLESTON, WV	CHARLESTON, WV	RPG MSCF BDDS	RLX	WN9414
CINCINNATI	WILMINGTON, OH	RPG MSCF BDDS	ILN	WN9710
CLEVELAND	CLEVELAND, OH	RPG MSCF BDDS	CLE	WN9524
COLUMBIA	WEST COLUMBIA, SC	RPG MSCF BDDS	CAE	WN9310
GREER	GREER, SC	RPG MSCF BDDS	GSP	WN9312
MOREHEAD CITY	NEWPORT, NC	RPG MSCF BDDS	MHX	WN9307
NORFOLK	WAKEFIELD, VA	RPG MSCF BDDS	AKQ	WN9952
DOVER AFB	WAKEFIELD, VA	RPG MSCF BDDS	AKQ	WN9952

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
PHILADELPHIA	MOUNT HOLLY, NJ	RPG MSCF BDDS	PHI	WN9950
PITTSBURGH	CORAOPOLIS, PA	RPG MSCF BDDS	PBZ	WN9917
PORTLAND, ME	GRAY, ME	RPG MSCF BDDS	GYX	WN9938
RALEIGH/DURHAM	RALEIGH, NC	RPG MSCF BDDS	RAH	WN9306
ROANOKE	BLACKSBURG, VA	RPG MSCF BDDS	RNK	WN9954
STATE COLLEGE	STATE COLLEGE, PA	RPG MSCF BDDS	CTP	WN9925
STERLING	STERLING, VA	RPG MSCF BDDS	LWX	WN9931
WILMINGTON	WILMINGTON, NC	RPG MSCF BDDS	ILM	WN9301

Southern Region



ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
ALBUQUERQUE	ALBUQUERQUE, NM	RPG MSCF BDDS	ABQ	WP9365
CANNON AFB AMARILLO	ALBUQUERQUE, NM AMARILLO, TX	MSCF RPG MSCF BDDS	ABQ AMA	WP9365 WP9363
ATLANTA	PEACHTREE CITY, GA	RPG MSCF BDDS	FFC	WP9219
ROBINS AFB AUSTIN/SAN ANTONIO AUSTIN/SAN ANTONIO	PEACHTREE CITY, GA NEW BRAUNFELS, TX	MSCF RPG MSCF BDDS	FFC EWX EWX	WP9219 WP9253 WP9253
LAUGHLIN AFB BIRMINGHAM	NEW BRAUNFELS, TX ALABASTER, AL	MSCF RPG MSCF BDDS	EWX BMX BMX BMX	WP9253 WP9957 WP9957 WP9957
NORTHEAST ALABAMA	ALABASTER, AL	RPG MSCF BDDS	BMX BMX BMX	WP9957 WP9957 WP9957
MAXWELL AFB BROWNSVILLE	ALABASTER, AL BROWNSVILLE, TX	MSCF BDDS MSCF RPG MSCF BDDS	BMX BMX BMX BRO	WP9957 WP9957 WP9957 WP9250

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CORPUS CHRISTI	CORPUS CHRISTI, TX	RPG MSCF BDDS	CRP	WP9251
DALLAS/FT WORTH	FORT WORTH, TX	RPG MSCF BDDS	FWD	WP9259
FT HOOD	FORT WORTH, TX	MSCF	FWD	WP9259
EL PASO	SANTA TERESA, NM	RPG MSCF	EPZ	WP9270
HOLLOMAN AFB	SANTA TERESA, NM	MSCF	EPZ	WP9270
EL PASO	SANTA TERESA, NM	BDDS	EPZ	WP9270
HOUSTON	DICKINSON, TX	RPG MSCF BDDS	HGX	WP9935
JACKSON, MS	JACKSON, MS	RPG MSCF BDDS	JAN	WP9235
COLUMBUS AFB	JACKSON, MS	MSCF	JAN	WP9235
COLUMBUS AFB	JACKSON, MS	RBDDS	JAN	WP9235
JACKSONVILLE	JACKSONVILLE, FL	RPG MSCF BDDS	JAX	WP9206
MOODY AFB	JACKSONVILLE, FL	MSCF	JAX	WP9206
KEY WEST	BOCA CHICA KEY, FL	RPG MSCF BDDS	BYX	WP9201

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
KNOXVILLE	MORRISTOWN, TN	RPG MSCF BDDS	MRX	WP9325
LAKE CHARLES	LAKE CHARLES, LA	RPG MSCF BDDS	LCH	WP9240
FT POLK	LAKE CHARLES, LA	MSCF	LCH	WP9240
LITTLE ROCK	NORTH LITTLE ROCK, AR	RPG MSCF BDDS	LZK	WP9340
LUBBOCK	LUBBOCK, TX	RPG MSCF BDDS	LUB	WP9933
MELBOURNE	MELBOURNE, FL	RPG MSCF BDDS	MLB	WP9204
MEMPHIS	MEMPHIS, TN	RPG MSCF BDDS	MEG	WP9334
MIAMI	MIAMI, FL	RPG MSCF BDDS	MFL	WP9918
MIDLAND/ODESSA	MIDLAND, TX	RPG MSCF BDDS	MAF	WP9265

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
MOBILE	MOBILE, AL	RPG MSCF BDDS MSCF	MOB MOB MOB	WP9223 WP9223 WP9223
EGLIN AFB	MOBILE, AL	RPG MSCF BDDS	OHX	WP9327
NASHVILLE	OLD HICKORY, TN	RPG MSCF BDDS		
NORMAN	NORMAN, OK	RPG	OUN	WP9921
NORMAN	NORMAN, OK	MSCF	OUN	WP9921
NORMAN	NORMAN, OK	BDDS	OUN	WP9921
ALTUS AFB	NORMAN, OK	MSCF	OUN	WP9921
ALTUS AFB	NORMAN, OK	RBDDS	OUN	WP9921
VANCE AFB	NORMAN, OK	MSCF	OUN	WP9921
VANCE AFB	NORMAN, OK	RBDDS	OUN	WP9921
SAN ANGELO	SAN ANGELO, TX	RPG	SJT	WP9263
SAN ANGELO		MSCF		
DYESS AFB	SAN ANGELO, TX	MSCF	SJT	WP9263
SAN JUAN FAA	SAN JUAN, PR	BDDS MSCF	SJU	WP9526
SHREVEPORT	SHREVEPORT, LA	RPG MSCF BDDS	SHV	WP9248
SLIDELL	SLIDELL, LA	RPG MSCF BDDS	LIX	WP9919

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
TALLAHASSEE	TALLAHASSEE, FL	RPG MSCF BDDS	TLH	WP9214
FT RUCKER TAMPA	TALLAHASSEE, FL RUSKIN, FL	MSCF RPG MSCF BDDS	TLH TBW	WP9214 WP9961
TULSA	TULSA, OK	RPG MSCF BDDS	TSA	WP9356
WESTERN ARKANSAS	TULSA, OK	RPG MSCF BDDS	TSA	WP9356
Central Region				
ABERDEEN	ABERDEEN, SD	RPG MSCF BDDS	ABR	WR9659
BISMARCK	BISMARCK, ND	RPG MSCF BDDS	BIS	WR9764
MINOT AFB CHEYENNE	BISMARCK, ND CHEYENNE, WY	MSCF RPG MSCF BDDS	BIS CYS	WR9764 WR9564

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
CHICAGO	ROMEDEVILLE, IL	RPG MSCF BDDS	LOT	WR9969
DENVER	BOULDER, CO	RPG MSCF BDDS	BOU	WR9469
DES MOINES	JOHNSTON, IA	RPG MSCF BDDS	DMX	WR9546
DETROIT	WHITE LAKE, MI	RPG MSCF BDDS	DTX	WR9954
DODGE CITY	DODGE CITY, KS	RPG MSCF BDDS	DDC	WR9451
DULUTH	DULUTH, MN	RPG MSCF BDDS	DLH	WR9745
PADUCAH	PADUCAH, KY	RPG MSCF BDDS	PAH	WR9957
FT CAMPBELL	PADUCAH, KY	BDDS MSCF	PAH	WR9957
FARGO/GRAND FORKS	GRAND FORKS, ND	RPG MSCF BDDS	FGF	WR9750

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
GOODLAND	GOODLAND, KS	RPG MSCF BDDS	GLD	WR9465
GRAND ISLAND	HASTINGS, NE	RPG MSCF BDDS	GID	WR9552
GRAND JUNCTION	GRAND JUNCTION, CO	RPG MSCF BDDS	GJT	WR9476
GRAND RAPIDS	GRAND RAPIDS, MI	RPG MSCF BDDS	GRR	WR9635
GREEN BAY	GREEN BAY, WI	RPG MSCF BDDS	GRB	WR9645
INDIANAPOLIS	INDIANAPOLIS, IN	RPG MSCF BDDS	IND	WR9438
JACKSON, KY	JACKSON, KY	RPG MSCF BDDS	JKL	WR9956
LA CROSSE	LA CROSSE, WI	RPG MSCF BDDS	ARX	WR9643
LINCOLN	LINCOLN, IL	RPG MSCF BDDS	ILX	WR9436

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
LOUISVILLE	LOUISVILLE, KY	RPG MSCF BDDS	LMK	WR9423
MARQUETTE	NEGAUNEE, MI	RPG MSCF BDDS	MQT	WR9743
MILWAUKEE	DOUSMAN, WI	RPG MSCF BDDS	MKX	WR9965
MINNEAPOLIS	CHANHASSEN, MN	RPG MSCF BDDS	MPX	WR9658
NCL MICHIGAN	GAYLORD, MI	RPG MSCF BDDS	APX	WR9610
NORTH PLATTE	NORTH PLATTE, NE	RPG MSCF BDDS	LBF	WR9562
NORTHERN INDIANA	NORTH WEBSTER, IN	RPG MSCF BDDS	IWX	WR9534
OMAHA	VALLEY, NE	RPG MSCF BDDS	OAX	WR9553
PLEASANT HILL	PLEASANT HILL, MO	RPG MSCF BDDS	EAX	WR9446



ATTACHMENT 5 (Continued)

EFFECTIVITY			
NEXRAD Site Name	City, ST	EQP	SID      ORG Code
PUEBLO	PUEBLO, CO	RPG	PUB      WR9464
		MSCF	
		BDDS	
QUAD CITIES	DAVENPORT, IA	RPG	DVN      WR9544
		MSCF	
		BDDS	
RAPID CITY	RAPID CITY, SD	RPG	UNR      WR9662
		MSCF	
		BDDS	
RIVERTON/LANDER	RIVERTON, WY	RPG	RIW      WR9576
		MSCF	
		BDDS	
SIOUX FALLS	SIOUX FALLS, SD	RPG	FSD      WR9651
		MSCF	
		BDDS	
SPRINGFIELD	SPRINGFIELD, MO	RPG	SGF      WR9440
		MSCF	
		BDDS	
ST LOUIS	WELDON SPRING, MO	RPG	LSX      WR9971
		MSCF	
		BDDS	
TOPEKA	TOPEKA, KS	RPG	TOP      WR9456
		MSCF	
		BDDS	
WICHITA	WICHITA, KS	RPG	ICT      WR9450
		MSCF	
		BDDS	

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
BILLINGS	BILLINGS, MT	RPG	BYZ	WT9677
		MSCF		
		BDDS		
BOISE	BOISE, ID	RPG	BOI	WT9681
		MSCF		
		BDDS		
CEDAR CITY	SALT LAKE CITY, UT	RPG	SLC	WT9932
		MSCF		
		BDDS		
SALT LAKE CITY	SALT LAKE CITY, UT	RPG	SLC	WT9932
		MSCF		
		BDDS		
ELKO	ELKO, NV	RPG	LKN	WT9903
		MSCF		
		BDDS		
EUREKA (BUNKER HILL)	EUREKA, CA	RPG	EKA	WT9594
		MSCF		
		BDDS		
FLAGSTAFF	BELLEMONT, AZ	RPG	FGZ	WT9375
		MSCF		
		BDDS		
GLASGOW	GLASGOW, MT	RPG	GGW	WT9768
		MSCF		
		BDDS		

ATTACHMENT 5 (Continued)

EFFECTIVITY				
NEXRAD Site Name	City, ST	EQP	SID	ORG Code
GREAT FALLS	GREAT FALLS, MT	RPG MSCF BDDS	TFX	WT9950
LAS VEGAS	LAS VEGAS, NV	RPG MSCF BDDS	VEF	WT9386
EDWARDS AFB LOS ANGELES	LAS VEGAS, NV OXNARD, CA	RPG MSCF BDDS	VEF LOX	WT9386 WT9295
MEDFORD	MEDFORD, OR	RPG MSCF BDDS	MFR	WT9597
MISSOULA	MISSOULA, MT	RPG MSCF BDDS	MSO	WT9773
PENDLETON	PENDLETON, OR	RPG MSCF BDDS	PDT	WT9688
PHOENIX	PHOENIX, AZ	RPG MSCF BDDS	PSR	WT9278
YUMA	PHOENIX, AZ	RPG MSCF BDDS	PSR	WT9278

ATTACHMENT 5 (Continued)

EFFECTIVITY			
NEXRAD Site Name	City, ST	EQP	SID      ORG Code
POCATELLO	POCATELLO, ID	RPG	PIH      WT9578
		MSCF	
		BDDS	
PORTLAND, OR	PORTLAND, OR	RPG	PQR      WT9698
		MSCF	
		BDDS	
RENO	RENO, NV	RPG	REV      WT9488
		MSCF	
		BDDS	
SACRAMENTO	SACRAMENTO, CA	RPG	STO      WT9914
		MSCF	
		BDDS	
BEALE AFB SAN DIEGO	SACRAMENTO, CA SAN DIEGO, CA	MSCF	STO      WT9914
		RPG	SGX      WT9918
		MSCF	
SANTA ANA MTS	SAN DIEGO, CA	BDDS	
		RPG	SGX      WT9918
		MSCF	
SAN FRANCISCO	MONTEREY, CA	BDDS	
		RPG	MTR      WT9933
		MSCF	
SAN JOAQUIN VALY	HANFORD, CA	BDDS	
		RPG	HNX      WT9389
		MSCF	
		BDDS	

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SEATTLE	SEATTLE, WA	RPG MSCF BDDS	SEW	WT9922
SPOKANE	SPOKANE, WA	RPG MSCF BDDS	OTX	WT9785
TUCSON	TUCSON, AZ	RPG MSCF BDDS	TWC	WT9274

Alaskan Region

ANCHORAGE FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
BETHEL FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
KING SALMON FAA	ANCHORAGE, AK	MSCF	AFC	WV9904
MIDDLETON ISLAND	ANCHORAGE, AK	MSCF	AFC	WV9904
FAIRBANKS FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
NOME FAA	FAIRBANKS, AK	MSCF	AFG	WV9261
SITKA FAA	JUNEAU, AK	MSCF	AJK	WV9381

Pacific Region

ANDERSEN AFB	AGANA, GU	MSCF	GUM	WW9902
KAMUELA/KOHALA APT	HONOLULU, HI	MSCF	HFO	WW9182
MOLOKAI FAA	HONOLULU, HI	MSCF	HFO	WW9182

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SOUTH KAUAI	HONOLULU, HI	MSCF	HFO	WW9182
SOUTH SHORE FAA	HONOLULU, HI	MSCF	HFO	WW9182
<b>Miscellaneous</b>				
NATL CLIMATIC DATA CTR (NCDC)	ASHEVILLE, NC	RPG	NCCN7	WN9312
NRC #1	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #2	KANSAS CITY, MO	RPG	NRCM7	WG9163
NRC #1	KANSAS CITY, MO	MSCF BDDS	NRCM7	WG9163
NWSHQ TESTBED	SILVER SPRING, MD	RPG		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	MSCF		WG9310
NWSHQ TESTBED	SILVER SPRING, MD	BDDS		WG9310
OSF-3 (RPG/KOHLER GEN)	NORMAN, OK	RPG	OSFO2	WG9410
ROC DOD RPG (KREX)	NORMAN, OK	RPG		WG9420
ROC FAA REDUNDANT (RPG 1)	NORMAN, OK	RPG RPG	CRIO2	WG9410
ROC FAA REDUNDANT (RPG 2)	NORMAN, OK	RPG RPG	CRIO2	WG9410
ROC3 NWS RPG	NORMAN, OK	RPG		WG9410
ROC4 NWS RPG	NORMAN, OK	RPG		WG9410
WDTB RPG	NORMAN, OK	RPG		

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
PRC RPG	RESTON, MD	RPG MSCF BDDS	PRCV2	WG9310
TRAINING CENTER #1 NWSTC	KANSAS CITY, MO	RPG MSCF BDDS	TTCM7	WB9612
TRAINING CENTER #2 NWSTC	KANSAS CITY, MO	RPG	TTCM7	WB9612

DoD

ALTUS AFB	FREDERICK, OK	RPG	FDR	FE4419
ANDERSEN AFB	ANDERSEN AFB, GU	RPG	UAM	FE5240
BEALE AFB	OROVILLE, CA	RPG	BBX	FE4686
CAMP HUMPHREYS	CAMP HUMPHREYS, KO	RPG	PTK	FI5294
CAMP HUMPHREYS	YOKOTA AB, JA	MSCF		
KADENA AB	YOKOTA AB, JA	MSCF		
KUNSAN AB	YOKOTA AB, JA	MSCF		
CANNON AFB	FIELD, NM	RPG	FDX	FE4855
COLUMBUS AFB	GREENWOOD SPRINGS, MS	RPG	GWX	FE3022
DOVER AFB	ELLENDALE STATE FOREST, DE	RPG	DOX	FE4497
DYESS AFB	MORAN, TX	RPG	DYX	FE4661
EDWARDS AFB	BORON, CA	RPG	EYX	FE2805

## ATTACHMENT 5 (Continued)

## EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
EGLIN AFB	RED BAY, FL	RPG RBDDS	EVX	FE2823
FT CAMPBELL	TRENTON, KY	RPG	HPX	FY4812
FT DRUM	MONTAGUE, NY	RPG	TYX	FY4846
FT HOOD	GRANGER, TX	RPG	GRK	FY4824
FT POLK	FT POLK, LA	RPG	POE	FY4825
FT RUCKER	ECHO, AL	RPG	EOX	FY4805
HOLLOMAN AFB	RUIDOSO, NM	RPG RBDDS	HDX	FE4801
KADENA AB	KADENA AB, JA	RPG	KAD	FH5270
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	RPG	BIX	FE3010
KEESLER AFB MNTC TRNG A	KEESLER AFB, MS	MSCF	BIX	FE3010
KEESLER AFB MNTC TRNG B	KEESLER AFB, MS	MSCF RBDDS	BIX	FE3010
KUNSAN AB	KUNSAN AB, KO	RPG	KUZ	FH5284
LAJES AB	SANTA BARBARA, AZR	RPG MSCF	PLA	FE4486
LAUGHLIN AFB	BRACKETVILLE, TX	RPG	DFX	FE3099
MAXWELL AFB	CARRVILLE, AL	RPG	MXX	FE3300
MINOT AFB	DEERING, ND	RPG	MBX	FE4528
MOODY AFB	SOUTH STOCKTON, GA	RPG	VAX	FE4830
ROBINS AFB	JEFFERSONVILLE, GA	RPG	JGX	FE2067



ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
VANCE AFB	CHEROKEE, OK	RPG	VNX	FE3029
VANDENBERG AFB	ORCUTT, CA	RPG	VBX	FE4610
		MSCF		
		BDDS		
<b>FAA</b>				
ANCHORAGE FAA (RPG 1)	KENAI, AK	RPG	AHG	6901AJ
ANCHORAGE FAA (RPG 2)	KENAI, AK	RPG	AHG	6901AJ
BETHEL FAA (RPG 1)	BETHEL, AK	RPG	ABC	690112
BETHEL FAA (RPG 2)	BETHEL, AK	RPG	ABC	690112
FAIRBANKS FAA (RPG 1)	FAIRBANKS, AK	RPG	APD	690178
FAIRBANKS FAA (RPG 2)	FAIRBANKS, AK	RPG	APD	690178
KAMUELA/KOHALA APT(RPG 1)	KAMUELA, HI	RPG	HKM	699235
KAMUELA/KOHALA APT(RPG 2)	KAMUELA, HI	RPG	HKM	699235
KING SALMON FAA (RPG 1)	KING SALMON, AK	RPG	AKC	690137
KING SALMON FAA (RPG 2)	KING SALMON, AK	RPG	AKC	690137
MIDDLETON ISLAND (RPG 1)	MIDDLETON ISLAND, AK	RPG	AIH	690140
MIDDLETON ISLAND (RPG 2)	MIDDLETON ISLAND, AK	RPG	AIH	690140
MOLOKAI FAA (RPG 1)	MOLOKAI, HI	RPG	HMO	699213
MOLOKAI FAA (RPG 2)	MOLOKAI, HI	RPG	HMO	699213
NOME FAA (RPG 1)	NOME, AK	RPG	AEC	690147
NOME FAA (RPG 2)	NOME, AK	RPG	AEC	690147

ATTACHMENT 5 (Continued)

EFFECTIVITY

NEXRAD Site Name	City, ST	EQP	SID	ORG Code
SAN JUAN FAA (RPG 1)	SAN JUAN, PR	RPG	JUA	69F362
SAN JUAN FAA (RPG 2)	SAN JUAN, PR	RPG	JUA	69F362
SITKA FAA (RPG 1)	BIORKA ISLAND, AK	RPG	ACG	690141
SITKA FAA (RPG 2)	BIORKA ISLAND, AK	RPG	ACG	690141
SOUTH KAUAI FAA (RPG 1)	SOUTH KAUAI, HI	RPG	HKI	699211
SOUTH KAUAI FAA (RPG 2)	SOUTH KAUAI, HI	RPG	HKI	699211
SOUTH SHORE FAA (RPG 1)	NAALEHU, HI	RPG	HWA	699201
SOUTH SHORE FAA (RPG 2)	NAALEHU, HI	RPG	HWA	699201

ATTACHMENT 6

ORPG SOFTWARE BUILD 2.0 LOAD COMPLETION FORM

**DoD and FAA only will complete this form**

Site Name: \_\_\_\_\_

Site Identifier: \_\_\_\_\_

Total Time to Complete this Modification Document: \_\_\_\_\_

Technician's Name(s): \_\_\_\_\_

Technician's Phone Number: \_\_\_\_\_

Date Completed: \_\_\_\_\_

Equipment Modified (SID) RPG \_\_\_\_\_ MSCF \_\_\_\_\_ (R)BDDS \_\_\_\_\_

Problem(s) Encountered:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Upon completion of this form, return the information to the ROC using one of the four methods below:

1. Mailing Address: Program Branch, Retrofit Management Team  
WSR-88D Radar Operation Center  
3200 Marshall Ave., Suite 101  
Norman, OK 73072-8028
2. FAX Number: (405) 366-6553  
ATTN: Retrofit Management Team
3. E-mail Address: NEXRAD.Logistics@noaa.gov
4. Web Version: <http://www.roc.noaa.gov/ssb/logistics/completion.asp>

				ENGINEERING MANAGEMENT REPORTING SYSTEM MAINTENANCE RECORD				Document Number <b>G 51301</b>	
<b>General Information</b>		1. Open Date <b>09 / 23 / 02</b>	Time <b>0900</b>	2. Initials <b>DKR</b>	3. Response Priority (check one) <input type="radio"/> Immediate <input type="radio"/> Routine <input checked="" type="radio"/> Not Applicable	4. Close Date <b>09 / 23 / 02</b>	Time <b>1430</b>		
5. Description <b>INSTALL NEW SOFTWARE IAW SOFT NOTE 19</b>									
<b>Equipment Information</b>		6. Station ID <b>TOP</b>	7. Equipment Code <b>MSCF</b>	8. Serial Number <b>M0161</b>	9. TM <b>M</b>	10. AT <b>M</b>	11. How Mal. <b>999</b>		
12. EQUIPMENT OPERATIONAL STATUS TIMES		a. Fully Operational <input type="checkbox"/>	b. Logistics Delay <input type="checkbox"/>	Partly Operational	c. All Other <input type="checkbox"/>	d. Logistics Delay <input type="checkbox"/>	Not Operational	e. All Other <b>5:30</b>	
13. Parts Failure Information									
Block #	a. ASN	b.	NSN	c. TM	d. AT	e. How Mal.	f. Qty.	g. Maint. Hrs.	14. Work Load Information
1									Type a. Routine
2									b. Non-routine
3									c. Travel
4									d. Misc.
5									e. Overtime
									Staff Hrs. <b>5:30</b>
<b>Miscellaneous Information</b>		15. Maintenance Comments <b>INSTALLED SOFTWARE BUILD 2.0</b>							16. Initials <b>DKR</b>
17. SPECIAL PURPOSE REPORTING		a. Mod. No. <b>S19</b>	b. Mod./Act./Deact. Date <b>09/23/02</b>	c.	d.	e.			
18. CONFIGURATION MGMT. REPORTING (use as directed)		ASN	Vendor Part Number (New Part)		Serial Number (Old Part)		Serial Number (New Part)		